



# iPad Pro

SHOULD BE WIDELY WELCOMED

**THRILLING MOMENTS**

**THE HUNGER GAMES:  
MOCKINGJAY - PART 1**

**REVOLUTION IS ON THE HORIZON IN  
THE FRANCHISE'S 3RD INSTALLMENT**

**iOS 8**

**NEW TOUCH  
KEYBOARDS**

**OUTSIDE PARTY PROVIDES  
A SMARTER TYPE**

SEE DETAIL B

75 → 9.05 →  
0.46 → 2X Ø 1.6 → SCREW →  
9.23 → 11.96 → PEAKER →  
39 → 79 →

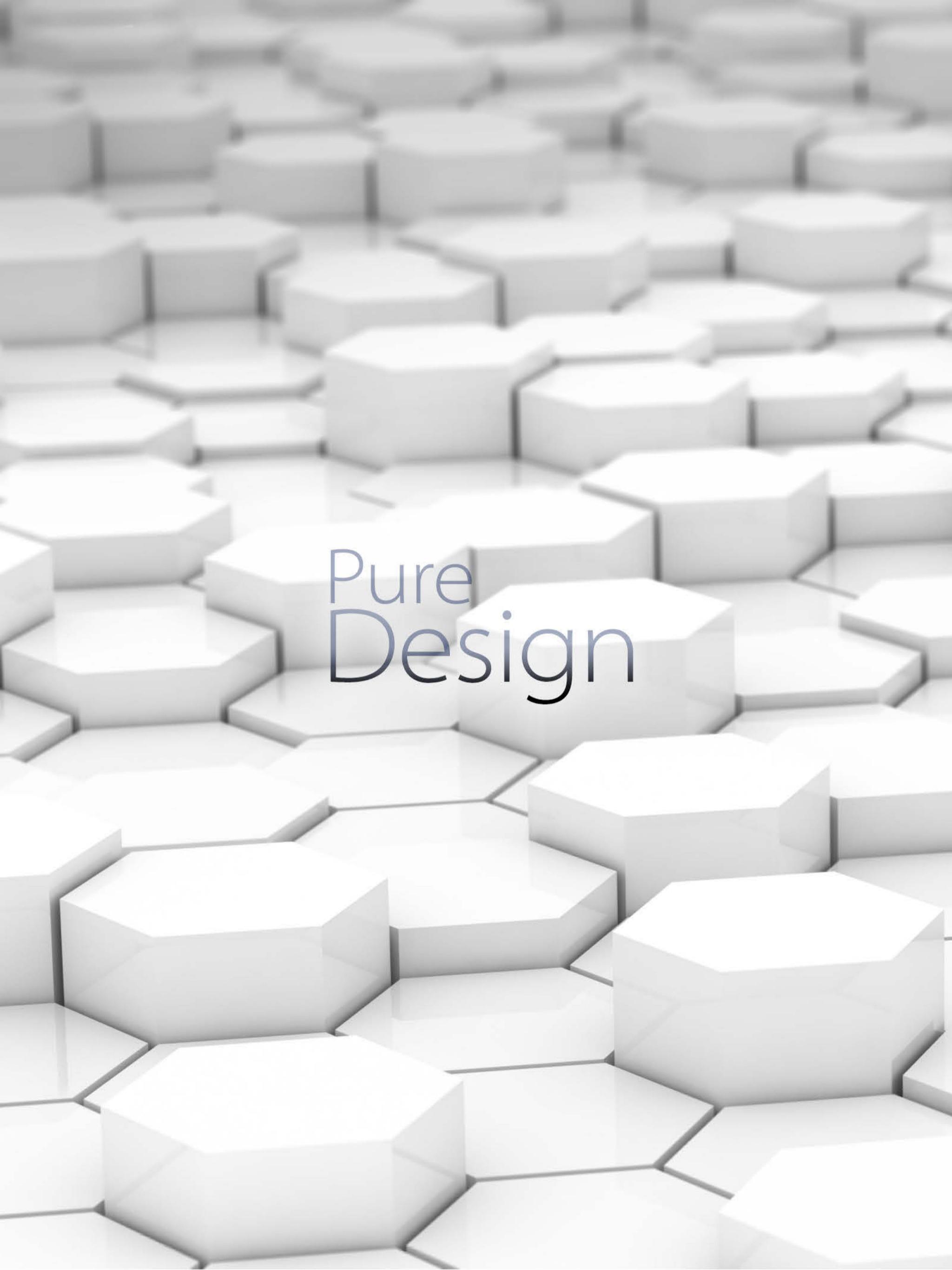
SEE DETAIL A

1.44 → ALL AROUND →  
123.83 → 90.39 →

1.88 → 3.36 →  
2.27 → 2X 2.59 →

18.73 → 2 1.65 →  
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REAR FLA → 2 REAR I →  
1.64 → 6.4 →  
REAR CAM →

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# SUMMARY

**GIFT GUIDE: DRAGONS, ALIENS,  
HEROES FOR THE GAMER**

72

**SCIENCE: HUGE SOLAR PLANT  
LAGS IN EARLY PRODUCTION**

06



**WHY AN iPAD PRO REALLY DOES MAKE SENSE**

WHY BIGGER iPAD SHOULD BE WIDELY WELCOMED



26

*Columns*

REVIEW: HTC RE CAMERA FUN, BUT DOESN'T BEAT PHONES 16

FACEBOOK'S PRIVACY UPDATE: 5 THINGS TO KNOW 40

REVIEW: APPLE'S iOS 8 PROVIDES A SMARTER TYPE 64

SCIENCE: SCIENTISTS 'CONFIDENT' COMET LANDER WILL WAKE UP 102

AT&T STOPS ADDING WEB TRACKING CODES ON CELLPHONES 110

NOKIA BOUNCES BACK WITH LAUNCH OF ANDROID TABLET 126

WHATSAAP ENCRYPTS MESSAGES FROM BEGINNING TO END 128

**TOP 10 APPS 82**

**iTUNES REVIEW 86**

**TOP 10 SONGS 116**

**TOP 10 ALBUMS 118**

**TOP 10 MUSIC VIDEOS 120**

**TOP 10 TV SHOWS 122**

**TOP 10 BOOKS 124**

# SCIENCE



# HUGE SOLAR PLANT LAGS IN EARLY PRODUCTION



The largest solar power plant of its type in the world - once promoted as a turning point in green energy - isn't producing as much energy as planned.

One of the reasons is as basic as it gets: The sun isn't shining as much as expected.

Sprawling across roughly 5 square miles of federal desert near the California-Nevada border, the Ivanpah Solar Electric Generating

System opened in February, with operators saying it would produce enough electricity to power a city of 140,000 homes.

So far, however, the plant is producing about half of its expected annual output for 2014, according to calculations by the California Energy Commission.

It had been projected to produce its full capacity for 8 hours a day, on average.



"Factors such as clouds, jet contrails and weather have had a greater impact on the plant than the owners anticipated," the agency said in a statement.

It could take until 2018 for the plant backed by \$1.6 billion in federal loan guarantees to hit its annual peak target, said NRG Energy Inc., which operates the plant and co-owns it with Google Inc. and BrightSource Energy.

"During startup we have experienced ... equipment challenges, typical with any new technology, combined with irregular weather patterns," NRG spokesman Jeff Holland said in a statement. "We are confident that Ivanpah's long-term generation projections will meet expectations."

The technology used at Ivanpah is different than the familiar photovoltaic panels commonly



used for rooftop solar installations. The plant's solar-thermal system - sometimes called concentrated-solar thermal - relies on nearly 350,000 computer-controlled mirrors at the site, each the size of a garage door.

The mirrors reflect sunlight to boilers atop 459-foot towers - each taller than the Statue of Liberty. The resulting steam drives turbines to create electricity.

When the \$2.2 billion complex opened, Energy Department Secretary Ernest Moniz called it a "symbol of the exciting progress" in renewable energy.

While the agency still says the project remains in good standing, Kaitlin Meese, an analyst at research firm Bentek Energy, said its early production figures "do not paint a strong picture for solar-thermal technology development."

The operation of such plants is highly dependent on weather conditions, and predicting when and how strongly the sun will shine is not a perfect science.

A little bit of inefficiency with mirrors can translate into a loss of power output ranging from small to significant, said Dr. Neil Fromer, executive director of the Resnick Sustainability Institute at the California Institute of Technology.

Problems could include getting the thousands of mirrors pointed in precisely the right direction, especially in the cool early morning, or keeping them clean in the dusty Mojave Desert.

Operators initially expected to need steam from gas-powered boilers for an hour a day during startup. After operations began, they found they









Image: Gilles Mingasson

needed to keep boilers running more than four times longer - an average of 4 1/2 hours a day.

State energy regulators in August approved the plant's request to increase the natural gas it is allowed to burn by 60 percent.

Additional natural gas could also be needed to operate boilers when clouds thicken or to maintain output at the end of the day and extend the capability for power production, the company said.

"Because the plant requires sunlight to heat water and turn it to steam, anything that reduces the sunlight will affect steam conditions, which could damage equipment and potentially cause unsafe conditions," said the commission, which approved the request for increased gas use.

Fromer said it was surprising that so much additional gas is needed, adding that it "signals to me they have some very large problems that they are going to need to sort out."

Plants owners said they are learning on the fly to some extent.

"For some aspects of operation, the only way to fully understand how the systems work has been through the experience of operating," plant owners wrote in the request to increase gas use.

Holland said the company always expected a ramp-up period of four years to reach maximum output. That extended period was not publicly disclosed, however. Holland said it is outlined in confidential agreements with two California

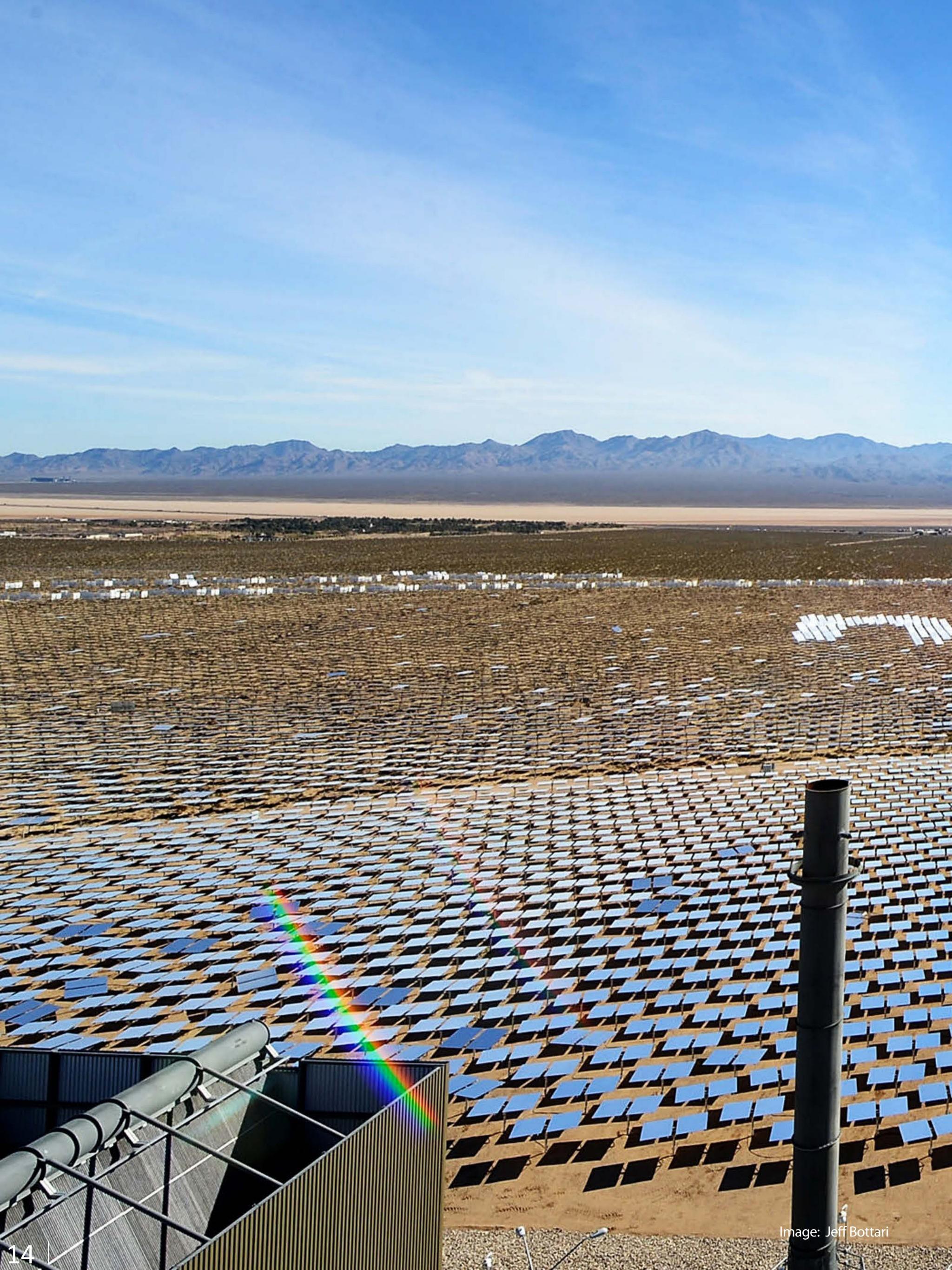


Image: Jeff Bottari



utilities buying the power, Southern California Edison and Pacific Gas and Electric Co.

Brightsource said on its website that the weather has generally been substantially worse than historical averages - in other words, cloudy - resulting in reduced output in certain months.

"We remain confident that over time the sun at Ivanpah will be more than sufficient for the plant to meet its expected performance targets," the statement said.



# REVIEW:

*HTC RE CAMERA FUN, BUT DOESN'T BEAT PHONES*







Don't live your life through a screen.

That's the premise behind HTC's new Re camera, which aims to let users document all of life's little moments and actually experience them, too, instead of watching through a viewfinder or a screen. In fact, the Re doesn't have either - we'll get to that.

The camera, launching Saturday in the U.S., is tiny, waterproof and easy to grip. But, at \$199, is it good enough to replace your smartphone or digital camera?

## HOW IT WORKS

Some people asked if it was an asthma inhaler, but the Re is better described as a miniature submarine periscope, about the size of a small candy bar. There's no need to turn it on. You grab it, and it's ready to shoot. To take stills of up to 16 megapixels, click one button quickly. Or hold that button and record video at 1080p high definition. A second button triggers a slow-motion video mode.

Like I said, there's no viewfinder or display of any kind. You can view what you're shooting through an app on your phone, but if I'm going to do that, I might as well just take the shot with my phone.

The lens is wide-angled, so ostensibly you'll shoot whatever you point at, but in practice it wasn't that simple. I had to guess where subjects would end up relative to the background. Many times, they were too far off to the side. I also didn't notice my glove obstructing many of the shots taken during a half-marathon in a Hudson Valley state park last





weekend. And while phones and digital cameras show you the image as soon as you snap it, I didn't find out my pictures were poor until I got home and looked at them on my phone.

You don't have to have an HTC phone to control settings and transfer images to your smartphone. You can use free apps for Apple and Android devices. You can also set up backups to Dropbox or Google Drive, though that feature wasn't working reliably with the pre-production software I was testing. It's supposed to be fixed with the version that ships.





## IN ACTION

There's no zoom. This is a flaw with camera phones as well, which fake zoom using a software technique that degrades image quality. But when that's all you have, that so-called digital zoom eliminates the need to crop photos later. The Re doesn't offer that option, so other half-marathon runners appear far ahead in the distance. With zoom, I wouldn't seem as much of a slowpoke.

The Re comes with a fixed-focus lens that's ideal for subjects 40 feet to 130 feet from you. Closer up, you'll notice some blur, even if the subject is still. I got some OK shots of my cousin's 2-year-old in a New York City playground, but images lacked the sharpness I usually strive for. Also because of how you hold the device, it's biased toward horizontal shots.

After the playground visit, we went to a well-lit indoor exhibit of "Sesame Street." Shots of Big Bird and other Muppets came out fine, though feathers looked duller than shots I took with the better cameras in Apple and Samsung phones.

Shots were disappointing in low-light settings, whether outdoors at night or inside a dark bar. Part of that comes from the lack of a flash. But many camera phones do better with flashless images - in some cases because their lenses are able to open wider for more light and less blur.





## SO WHO SHOULD USE THE RE?

The Re does allow you to watch your kid's recital or a parade or to talk to your friend eye to eye, without a screen in the way as you try to record the moment.

Because it's always "on," it's quicker than whipping out your phone or camera to snap impromptu fun. I found it was better for video than snapshots as minor blur doesn't matter when everything's moving anyway. And HTC has included technology to minimize camera shake for video, but not yet for stills. Kids seem to gravitate toward the device, not knowing what it does. My cousin's kid ran around with the Re. It was neat seeing the world through her eyes. It's also good to have in a pool, as it's waterproof, unlike most phones.

But the Re is no replacement for a camera phone. It's more of a supplement for the times you don't want to hold your phone. You'll have to decide if that's worth the price tag.



SCIENCE FICTION FANS PREPARE FOR  
THE DIVERGENT SERIES:  
**INSURGENT**

A dramatic black and white photograph showing a close-up of a hand gripping a handgun. As the trigger is pulled, numerous small, bright bullet casings are shown flying off the barrel in all directions, creating a sense of intense action and violence.

*Eagerly awaited new addition  
to Divergent trilogy*

## ORIGINAL CAST RETURNS WITH NEW ADDITIONS

Calling all aficionados of science fiction action films! Are you still catching your breath after the blockbuster success of the Divergent movie earlier this year? The woman behind the original Divergent trilogy of adventure novels, Veronica Roth, **certainly has reason to be pleased with the \$288.75 million pulled worldwide by the last flick**, and there's already a sequel on the way.

Roth only wrote her debut novel, Divergent, in 2011, but earlier this year came the release of its film adaptation, with Lucy Fisher, Pouya Shabazian and Douglas Wick on production duties, while Evan Daugherty and Vanessa Taylor handled the screenplay. As you might expect, the cast was also pretty formidable, with Shailene Woodley, Theo James, Ashley Judd, Jai Courtney, Ray Stevenson, Zoë Kravitz, Miles Teller, Tony Goldwyn, Maggie Q and Kate Winslet all starring.

Now, we're all set for the release of a sequel on March 20, 2015, based on Roth's 2012 addition to the trilogy, Insurgent.

## AN INTRIGUING BACK STORY

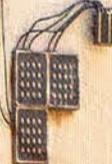
For those unaware, the original movie centered on the story of Beatrice "Tris" Prior, played by Woodley, who receives a warning that she is Divergent and will therefore never fit into one of the distinct factions - based on human virtues - that prevail in a dystopian post-apocalyptic Chicago.







*The Divergent Series: Insurgent Official Teaser Trailer*





That story is continued in the *The Divergent Series: Insurgent*, with Tris trying to make sense of the intention behind the insurrection of Erudite, as well as information subject to attempted protection by the Abnegation. The existing cast returns, alongside such supporting talents as Octavia Spencer, Naomi Watts, Suki Waterhouse and Rosa Salazar.

While there has been a change of director between the two movies - from Neil Burger to Robert Schwentke - Burger remains on board as executive producer. Brian Duffield and Akiva Goldsman, meanwhile, have taken on screenplay responsibilities. With filming having officially wrapped up in September and the conversion of the film to 3-D having subsequently taken place in post-production, all that remains is for us to see the movie itself.

## A TRULY TEASING TEASER TRAILER

The minute-long trailer that has been released for *The Divergent Series: Insurgent* is a little short on plot details, but nonetheless very much does its job of teasing you ahead of the complete flick. It's suitably dramatic, only featuring two characters, Tris and her mother Natalie Prior (played by Judd), **as the latter becomes trapped in a burning house.**

We're presuming that this is some sort of dream sequence rather than a depiction of actual events in the film, given Natalie's death in the original *Divergent*. Maybe it's - as speculated by the *Los Angeles Times' Hero Complex site* - "a drug-induced

hallucination that plays on a character's fears", "an imaginary test that that Tris must pass" (the suggestion of Time) or something completely different.

What the trailer is basically about - other than leaving us guessing about the finer details - is showing off the movie's admittedly impressive CGI. In the wake of the previous film's success, we don't doubt that the trailer will be more than enough to get fans heading to the cinema in their droves. Even the movie poster doesn't offer many more clues, **given its depiction of that same burning house.**

## FAN AND CRITICAL REACTION TO THAT TRAILER

If you needed any evidence of just how much meaningful insight could be gleaned from a mere 60-plus second trailer, **you would only need to read about the endless fan and critical reaction to it.** In all fairness, the trailer was released after months of the movie's stars suggesting that the latest addition to the Divergent movie trilogy would feature more action, and it definitely didn't disappoint on that front.

One fan on Twitter declared the teaser to be "just breathtaking, I love the effects so much, congrats to all the Divergent team!", while another commented: "I have no words to express myself right now. The #InsurgentTeaser was much more than I was expecting. I'm shocked."

As for the critical reaction, Zach Dennis, writing for EnStars, cited four things that





viewers could learn from the trailer. They included that **Tris is still burdened with regret about how the original Divergent ended**,

Dennis commenting that her mother's death had "left a giant hole inside her heart".

Dennis added that the trailer was also enough to confirm that "a lot more action is on the way for this movie", backing up Woodley and costar Theo James' recent claims. The two actors said that a train sequence later in the movie would particularly impress.

Among Dennis' other conclusions were that "Tris will be split between people she cares about", pointing to "rumors that a love triangle between Four (James) and another character could be created", as well as "the underlying threat that her brother Caleb (Ansel Elgort) could be betraying her."

Also tipped by Dennis was that "The movie will pull a Hunger Games and up the ante in the sequel", adding that "While big events happened in the first movie, even more will happen in this one."

Finally, Dennis described the trailer as "only the start of what will happen", commenting that "We have yet to see Four, Caleb, Peter and the rest of the gang yet so there is still a lot to learn as we approach the movie."

## WOODLEY SOUNDS FULL OF ENTHUSIASM

Looking back to October, Woodley certainly primed us all for this trailer when he told the New York Daily News that the new movie "has





so much more action than Divergent did and the action scenes are, like, seven-minute long sequences." The 23-year old was obviously anxious to avoid spoilers, but did reveal that **one scene sees her dangling in a high harness while surrounded by green screens.**

She continued: "Then they compiled the shots and showed me on the screen what it would look like and I remember being like, 'A, technology is f\*\*\*\* crazy and B, it's so much fun'. I felt like Spider-Man." With Woodley **having also suggested that there will be a richer story, with more focus on the characters' relationships**, it sounds like Insurgent will be a step forward from Divergent in more ways than one.

While Woodley described the movie as "pretty emotional" in an interview with Hero Complex, James qualified that it wasn't "in a cheesy way". He added: "There's real stakes behind it, and sometimes that's hard to find in spectacular situations. If you're watching these movies that are spectacles, which are fun and it's about this thing and escapism, sometimes the crux of the emotionality gets lost. That doesn't necessarily sometimes matter, but we are trying to retain that with this film."









## ALL OF THE ESSENTIAL INGREDIENTS ARE PRESENT AND CORRECT

The original *Divergent* was certainly not short of accolades, Beatrice "Tris" Prior winning the Favorite Character award at the MTV Movie Awards, while at the Teen Choice Awards, the film carried away the gongs for Choice Movie: Action, Choice Movie Actor: Action (James), Choice Movie Actress: Action (Woodley) and Choice Breakout Star (Ansel Elgort). There was also a host of nominations for the movie at the Young Hollywood Awards.

*Insurgent* certainly seems to have all of the qualities to match the original *Divergent*'s box office success, but that does beg the question... will there be a movie for the third novel in the trilogy, *Allegiant*? The short answer is yes, of course. In fact, it was announced in April that there would be two. Lionsgate **confirmed that the first part of *Allegiant* would hit theaters on March 18 next year**, with the second part following on March 24, 2017.

For now, though, let's revel in the upcoming second installment. If you're a fan of young adult science fiction and have grown even the tiniest bit tired of *The Hunger Games*, or even if you haven't, this film simply has to take pride of place in your cinema-going itinerary. ■

by Benjamin Kerry & Gavin Lenaghan



# FACEBOOK'S PRIVACY UPDATE:

## 5 THINGS TO KNOW





Facebook is once again trying to simplify its privacy policy, largely to address criticisms that it's too complex and lengthy for the average user.

Laid out with illustrations into short subsections, the new policy explains what types of information Facebook collects and how it uses the data. The new policy is 70 percent shorter than the old one.

Many of the changes are cosmetic, designed to make the policy easier to digest. Still, it helps to go through it to get an idea of all the things Facebook knows about you.

Users have until Nov. 20 to comment on the proposed changes or ask questions. A finalized version will take effect soon after that.

Here are five things to remember about Facebook's data policies.



## LOCATION, LOCATION

Facebook only recently began allowing businesses to advertise to users based on their specific location. Previously, ads were targeted based on the “current city” listed on the profile. Both the old policy and the new one note that the company can access your location information based on your smartphone’s GPS information. The new policy points out that Bluetooth and Wi-Fi signals can also reveal device locations.

Besides that, Facebook can also collect information from the photos you share on the site, including where they were taken.

## BEYOND FACEBOOK

Facebook doesn't just track what you do on its site. It also collects information about your activities when you're off Facebook. For example, if you use Facebook to log in to outside websites and mobile apps, the company will receive data about those. It also gets information about your activity on other businesses it owns, such as WhatsApp and Instagram, in accordance with those services' privacy policies.

## AD TARGETING

Unless you decline targeting, or opt out, companies whose websites you visit off Facebook can also show you ads on Facebook. For example, a website can use browser cookies to record who visited it. It can then ask Facebook to show ads to these visitors - both on and off Facebook. If you want to opt out in the U.S., you can visit this **website: <http://aboutads.info/choices>**





face



## ALL EYES ON YOU

Everything is fair game. Facebook explains it best: "We collect the content and other information you provide when you use our Services, including when you sign up for an account, create or share, and message or communicate with others." Plus, Facebook says it also collects information about how you use Facebook, "such as the types of content you view or engage with or the frequency and duration of your activities."

## SHOPPING SPREE?

Facebook is testing a tool to let people buy things directly through its site. If you decide to do this, Facebook will collect information about your transaction, including your credit card number and billing and shipping address.



# Why an iPad Pro really does make sense

*WHY BIGGER iPAD SHOULD BE WIDELY WELCOMED*





iPad

Designed by Apple in California Assembled in China Model A1433  
Complies with the Canadian ICES-003 Class B specifications  
IC: 209C-A1433 and IC: 579C-A1433 Serial: DLFH7NV8S

## RUMORED LARGER DEVICE COULD BE VERY GOOD NEWS

Looking at the Apple product range right now, including both the devices presently available and those in the pipeline for the coming months, you'd be forgiven for thinking that there's not much more the Cupertino firm could do. However, there must certainly be one more product in the offing for early next year, at least if widespread reports are to be believed: an iPad Pro.

The most recent October keynote was a big one for all admirers of Apple's well-established tablet, with a lithe iPad Air 2 breaking cover alongside the iPad mini 3. Indeed, the use of the term '**Air**' **mimics the naming conventions applied to the MacBook Air and Pro laptops**, which begs the question... will we get a more professional or educationally-oriented larger version of the tablet, bearing the name 'iPad Pro'?

The 'professionals' tablet' is certainly one category with growth potential, with Microsoft's Surface Pro 3 being an obvious rival for any offering from the Cupertino stable.

## AN ATTRACTIVE PROPOSITION FOR PROFESSIONALS

An iPad Pro would seem to make sense in a number of respects, given the opportunity that such a device would present for a beefy new processor for running heavy desktop-class applications, encompassing professional photo and video editing, 3D rendering/

modeling and real multitasking. Such a combination of functionalities would surely represent the next big step for tablets.

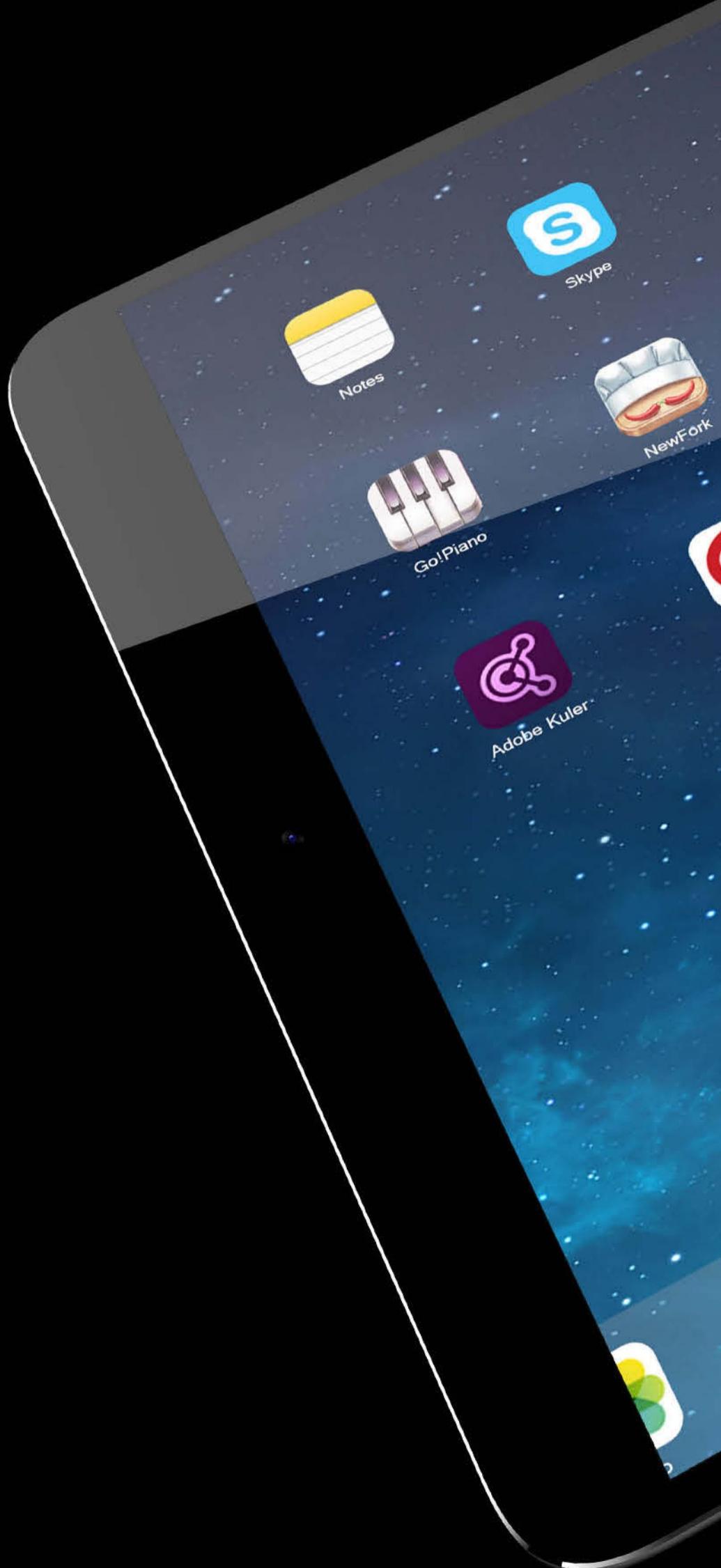
In recent years, it's appeared that we are heading swiftly in the direction of ever-smaller mobile devices, so the reversal of that trend that the larger 4.7-inch iPhone 6 and 5.5-inch iPhone 6 Plus apparently represented came as a surprise to some observers.

However, with those new devices being so well-received critically and commercially, there's reason to wonder whether the experience with the larger screens could be repeated with the same success with the iPad.

## SIZE MATTERS, AT LEAST FOR THE iPad PRO

Back in late August when Bloomberg reported on the possibility of such a device, **suggesting that production was "scheduled to commence by the first quarter of next year"**, the talk - "according to people with knowledge of the matter" - was of a screen measuring 12.9 inches diagonally.

That, of course, would be a significant jump on the 7.9 inches and 9.7 inches of the currently available iPads, and would also match the Surface Pro 3's display real estate. At the beginning of this month, however, it was reported by the Japanese-language macotakara website - which has a good record of accuracy as far as the details of future Apple products are concerned - that a **slightly smaller 12.2-inch screen was also a possibility**.









That report gave us some further intriguing information about the form that an iPad Pro could take. The site's source apparently **predicted a front-projection form factor similar to that of the Surface Pro 3**, and that while the device would be thicker than the 6.1mm iPad Air 2, the exact measurement would be somewhere between the 6.9mm iPhone 6 and the 7.1mm iPhone 6 Plus.

## WE COULD BE IN FOR IMPRESSIVE POWER, TOO

Various other design features were referenced in the macotakara report, including two additional speakers and an extra microphone apparently to be found on the top of the device, possibly making the device "capable of supporting stereo audio".

There have also been rumors that **the iPad Pro will make use of the iPad Air 2's A8X processor**. However, other speculation points to an enhanced version of the company's 64-bit A7 chip possibly being favored.

One other normally very reliable source of information on upcoming Apple products is KGI Securities analyst Ming-Chi Kuo, who said earlier this month that the larger tablet would not now enter mass production until the second quarter of 2015 at least, given ongoing manufacturing issues. Kuo blamed the delay on the extra time needed by Apple to improve component yield and assembly.

This, in turn, is apparently needed due to Apple's plans for an oxide panel in the device





to make possible a "high resolution, quick response and high color saturation."

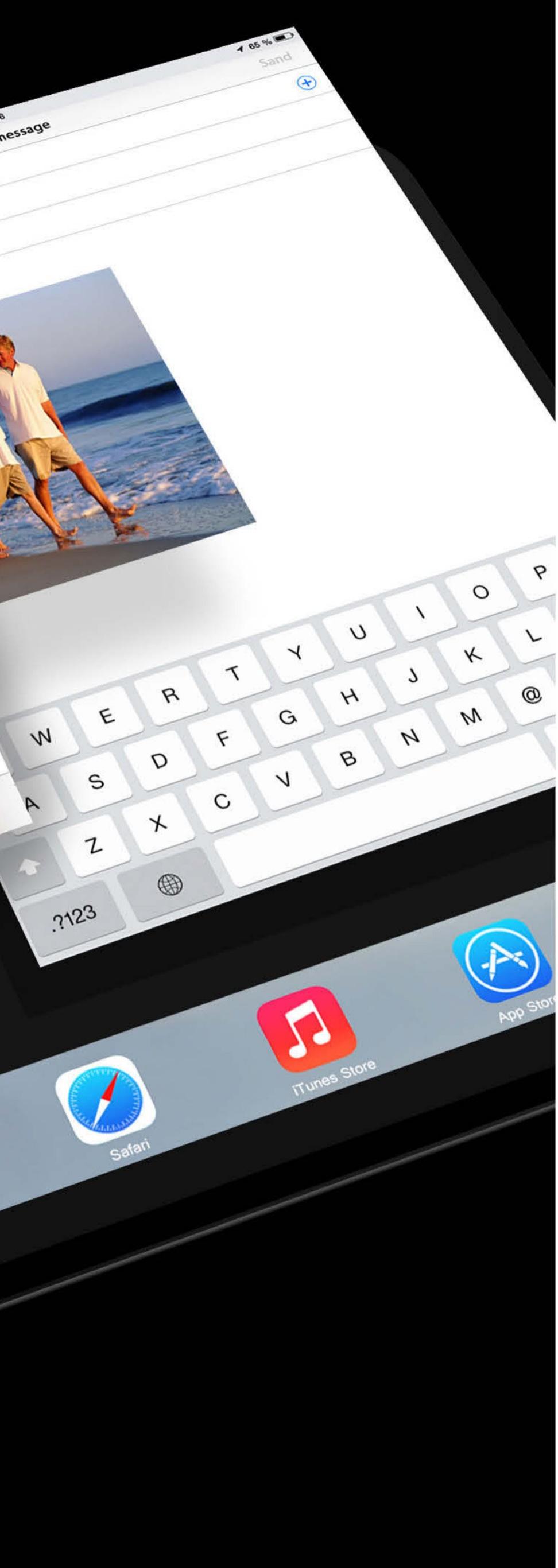
## THERE CERTAINLY SEEMS TO BE A MARKET FOR SUCH A DEVICE

Another of Kuo's predictions is a 54.4 percent quarter-over-quarter slide in iPad shipments to just 9.8 million units in 2015's first calendar quarter. Sure enough, the last three quarters have seen decreased sales of the venerable tablet, despite a still healthy-sounding 12.3 million iPads having been sold during the fourth fiscal quarter of this year.

Kuo blamed the wider tablet market's "structural challenges characterized by a lack of new applications and market saturation" for the decline, but Apple CEO Tim Cook has said that such figures represent a mere "speed bump" that the company can overcome. Earlier this year, he told investors that the iPad still presented scope for "significant innovation", and there's plenty of



Image: Ramotion



reason to suggest that an iPad Pro would be a major boost to the range.

With smartphones recently taking on ever-bigger screens, it's fair to say that they've been eating into the territory of their tablet bigger brothers. It seems that many of those who may have previously purchased an iPad mini or even the standard tablet may decide that an iPhone 6 Plus or other 'phablet' serves their needs perfectly well, creating the need for a tablet that makes its product category stand out once more.

## HOW THE iPAD PRO COULD REPLACE THE TRADITIONAL LAPTOP

The iPad's pretensions of replacing the time-honored laptop computer have long been mocked by many, but that could come closer to reality with the release of the iPad Pro.

IDC analyst Jitesh Ubrani has predicted that businesses, schools and governments will account for an ever-greater proportion of tablet purchasers. He said that in the second quarter of this year, those groups already represented 16 percent of tablet sales, a 13 percent rise on a year earlier.

Ubrani commented in an interview that he expected the enterprise market to be particularly attracted to larger tablets, and Apple appears to think likewise, given its announcement in January of a partnership with International Business Machines Corp. (IBM). Part of the idea behind the pact, according to Cook, was to sell to corporations to make them "a catalyst for future iPad growth."

## EXTRA FEATURES THAT HAVE BEEN MOOTED

As mentioned, there's been a lot of speculation about the many features that an iPad Pro could sport to make it attractive to these enterprise customers, and as invariably turns out to be the case ahead of iDevice launches, some of those rumors will be further off the mark than others.

Could we, for example, see a proprietary Apple iPad keyboard case break cover? Prior to the unveiling of the iPad Air, erstwhile Apple fellow Jamie Ryan said that then-current employees of the Cupertino firm had told him of such a case being in the prototyping stage, **apparently modeled on the Microsoft Surface Touch Cover.**

There's also been talk, for all of the late Steve Jobs' derogatory comments about styluses, of the iPad Pro being packaged with an iPen to make it a more feasible rival to Samsung's business-oriented Galaxy Note Pro, with its S Pen. Apple patents have been released in the online media for both a keyboard cover and a stylus in the past, so neither of the aforementioned are necessarily outlandish ideas.

The iPad Pro could also be made a greater productivity tool by **the incorporation of split-screen multi-tasking, as seen on such devices as Microsoft's Surface.** This was previously - in May - reported by 9to5Mac as a likely feature of iOS 8.



Image: iMore



## LOADS OF REASON FOR EXCITEMENT

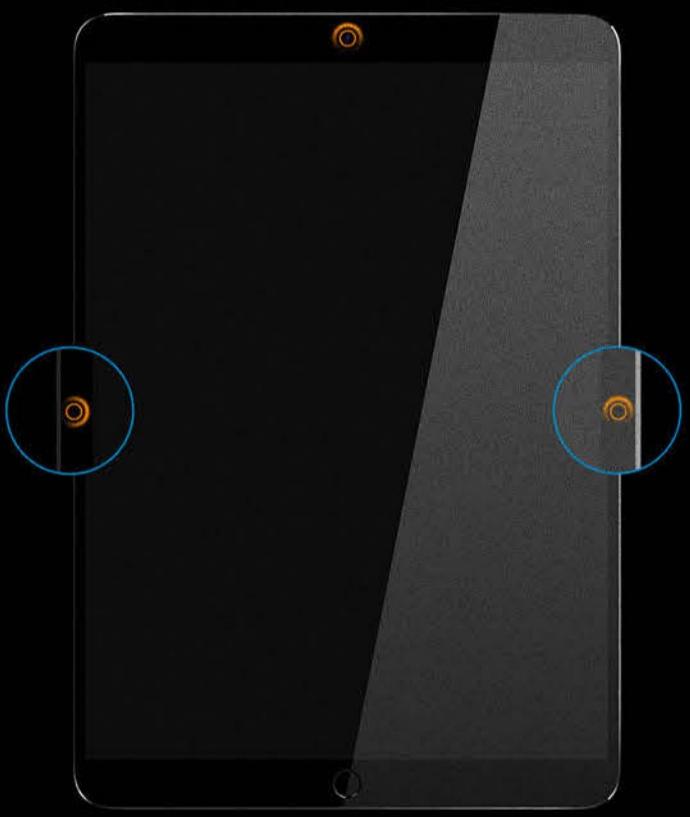
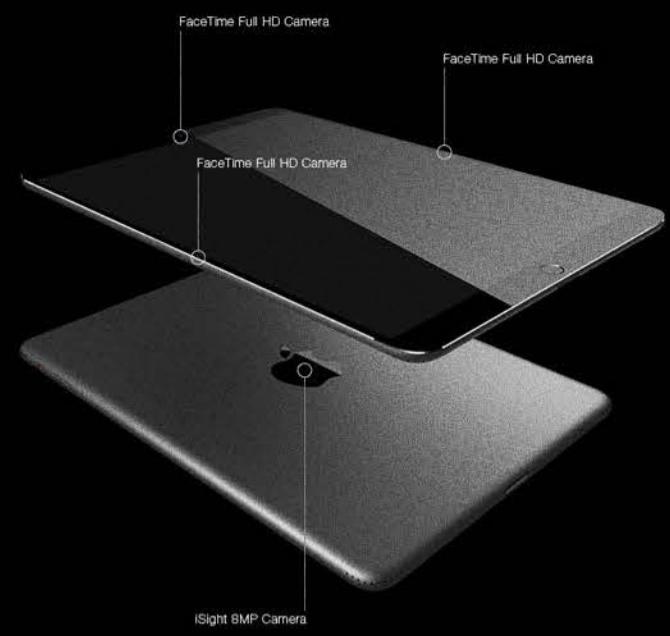
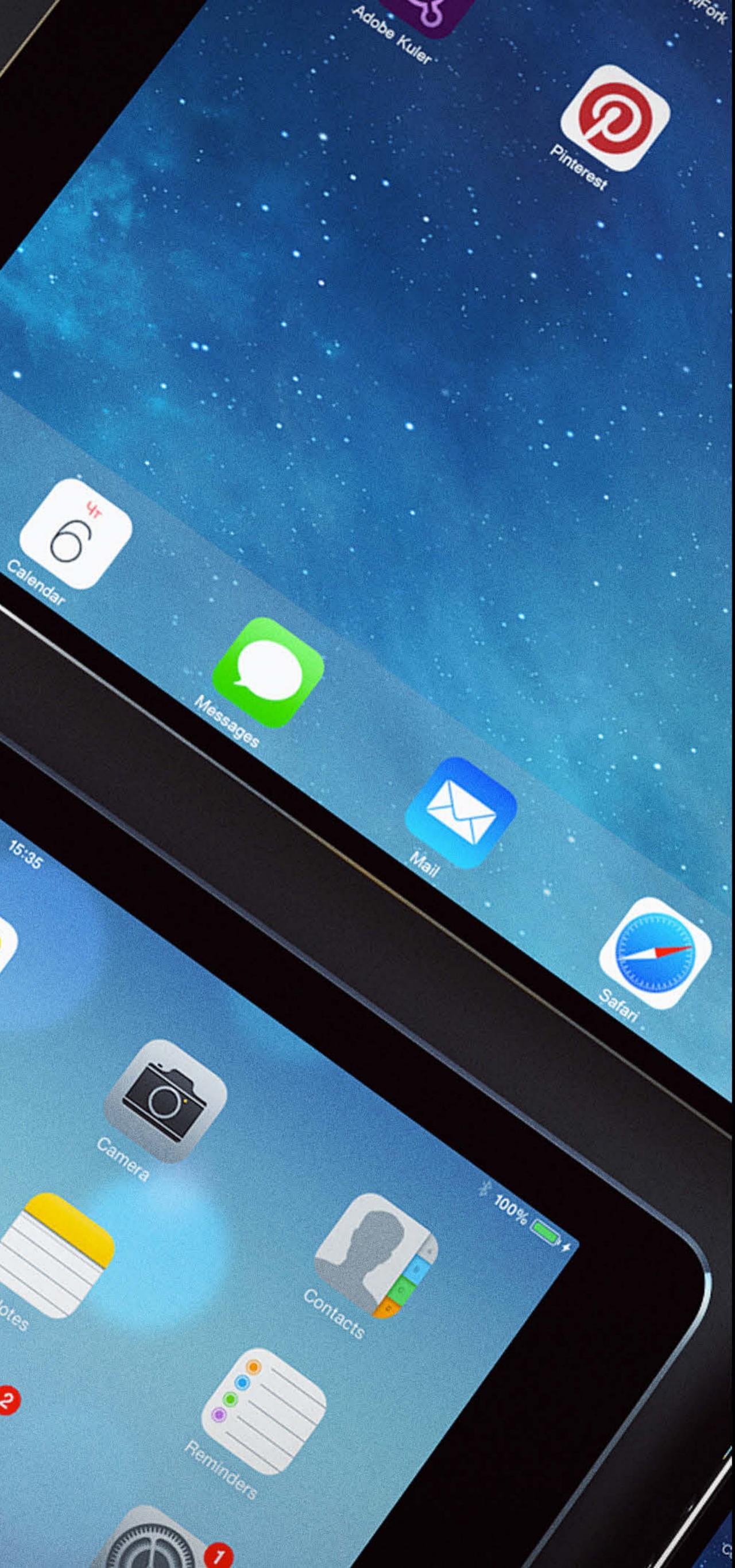
3D engineering, heavy desktop-class applications, a powerful processor, healthy battery life... they've all been talked about as possible selling points of the eventual iPad Pro, but right now, it's difficult to judge how likely they all are to come to pass.

All that we can really do is wait - but with the rumors gathering pace that there definitely will be such an iPad in the open by early next year, we'd be saving your money right now if we were you. ■

by Benjamin Kerry & Gavin Lenaghan

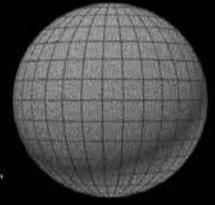


Image: Ramotion



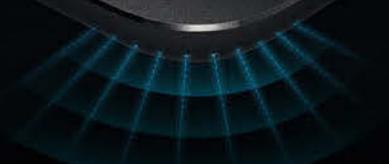
### Volumetric (3D) video calls

Imagine that thousands of miles from home, on a business trip, you can look and see which earrings your wife is wearing.



From now it is possible thanks to the unique 3D camera technology. 3 front cameras simultaneously record video from slightly different angles. This allows you to capture video from different viewpoints, using the same principles used in Seene.

The presence of 3 active cameras makes eye tracking and gestures control more accurate and opens new opportunities for people with disabilities.

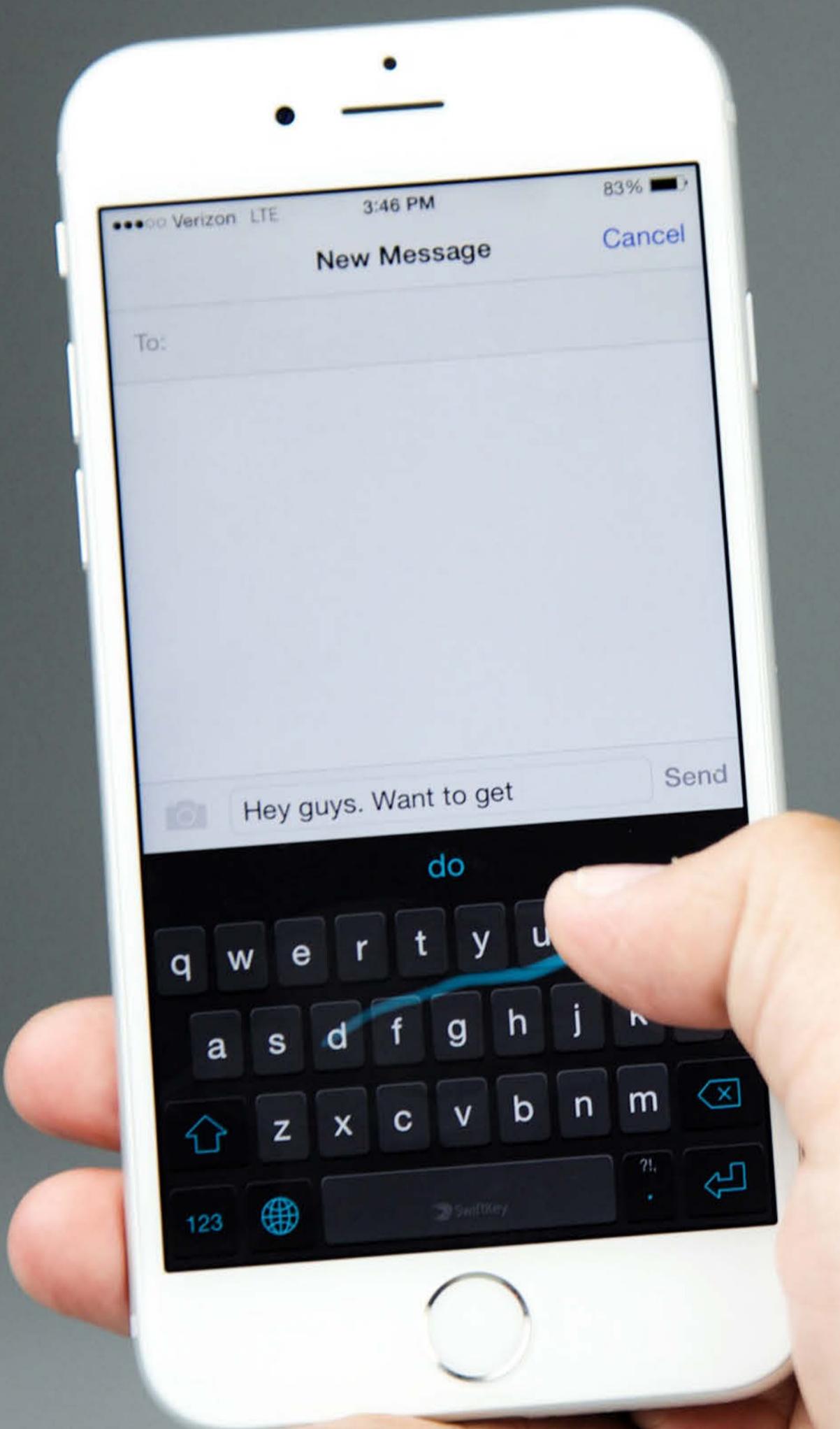




# REVIEW:

APPLE'S iOS 8 PROVIDES A SMARTER TYPE







I never would have considered writing this review on my iPhone if I hadn't upgraded to Apple's new operating system, iOS 8.

With the free upgrade, typing on the iPhone's touch keyboard doesn't seem as tedious, cumbersome or infuriating as it did before, when a rather dim-witted "auto-correct" system would slip in words that made people look illiterate or, even worse, inappropriate.

The new "QuickType" keyboard is smart enough to anticipate what you're typing, such as the next logical word in a phrase. You're constantly shown three word choices in a gray ribbon above the keyboard. When the right word appears, tapping on it automatically inserts it into the text to save keystrokes. I just avoided 15 by tapping on "automatically" and "keystrokes" when they popped up.

If that's not slick enough, iPhone and iPad users can choose one from an outside party, similar to what Google's Android operating system has

allowed for years. A few are free, while others cost 99 cents to \$4.99.

Switching to a different keyboard just requires pressing on a small globe near the space bar, a tool that allowed me to use each one as I wrote about them for this review. I am focusing on the keyboards that I liked best, though I also experimented with several others, including Flesky (99 cents) and Textexpander (\$4.99).

### APPLE'S QUICKTYPE (FREE)

This keyboard strives to predict what words are being typed so you don't have to spend as much time pecking on your device. For the most part, QuickType fulfills that mission. It does a good job anticipating common words like "the" and "you," but also understands when to list words like "immolation." It also had no problem automatically filling in email addresses when I was in my Gmail app or tagging people when

1:35 PM

1 0 \*

AT&T

< Messages

Mom

Yesterday 4:34 PM

Can I call y

Looking

Of course you can

I want to look at cars!



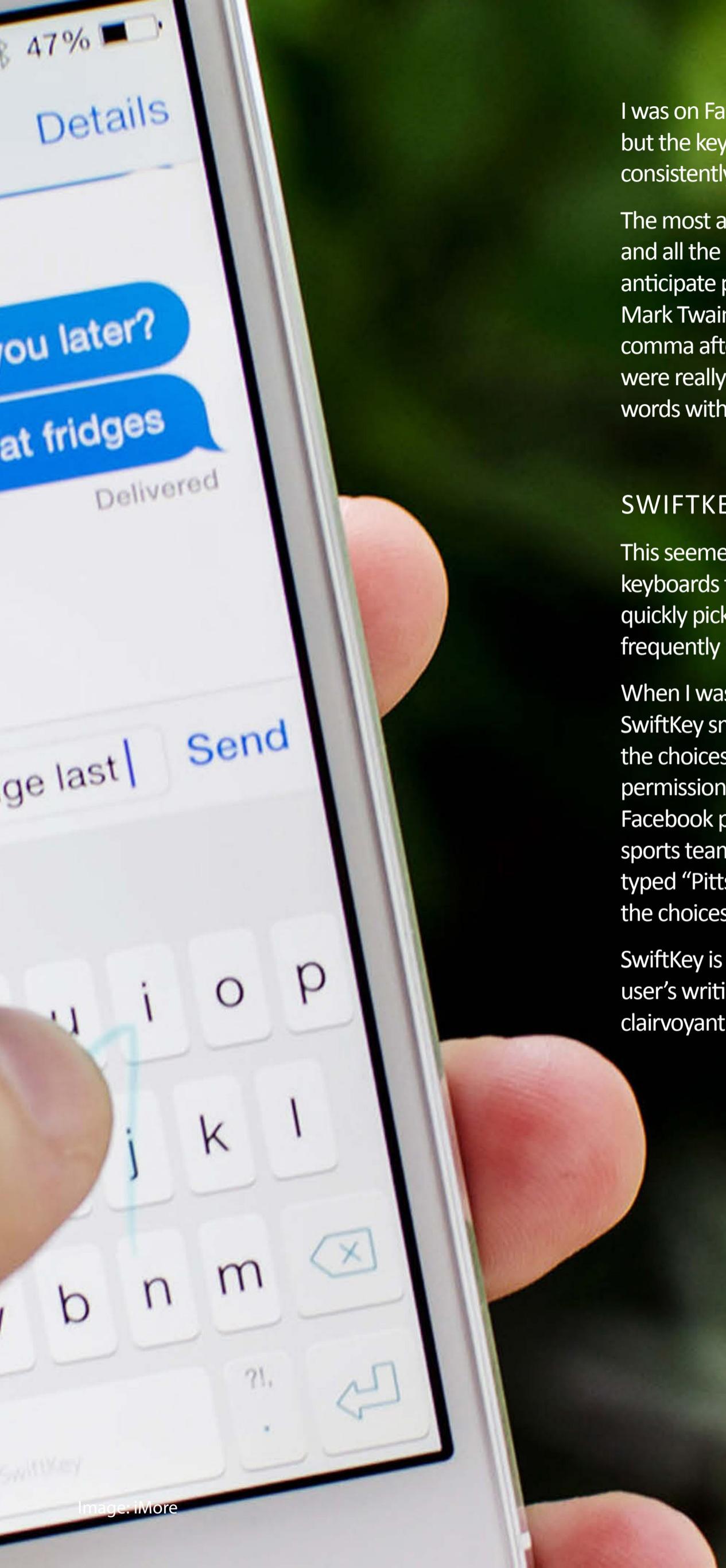
We picked out a frid

night

o

c v

2



I was on Facebook. These are common tasks, but the keyboards from outside parties couldn't consistently do them in my tests.

The most annoying aspect about QuickType and all the other keyboards is their inability to anticipate punctuation marks. When I type, "As Mark Twain once said," I have to go back to add a comma after tapping on "said." If these keyboards were really smart, they would start to include words with punctuation among the choices.

## SWIFTKEY (FREE)

This seemed to be the most intelligent of the keyboards that I tried. As promised, SwiftKey quickly picked up on my writing style and frequently used words.

When I was writing an email about New Orleans, SwiftKey smartly included "Quarter" among the choices after I typed "French." With your permission, SwiftKey also scans posts on your Facebook page. It seemed to know my favorite sports teams right away. For instance, when I typed "Pittsburgh," it included "Steelers" among the choices for the next word.

SwiftKey is supposed to pay attention to each user's writing style to become ever-more clairvoyant as time goes on.

## SWYPE (99 CENTS)

The main appeal of this keyboard is a feature that inspired its name: the ability to enter text by swiping across the keyboard instead of tapping on keys.

This is especially useful for common punctuation. For instance, that comma and space were created with a swipe from the comma to the space bar. And how about this? That question mark was entered with a quick swipe down from the “m” key to the space bar.

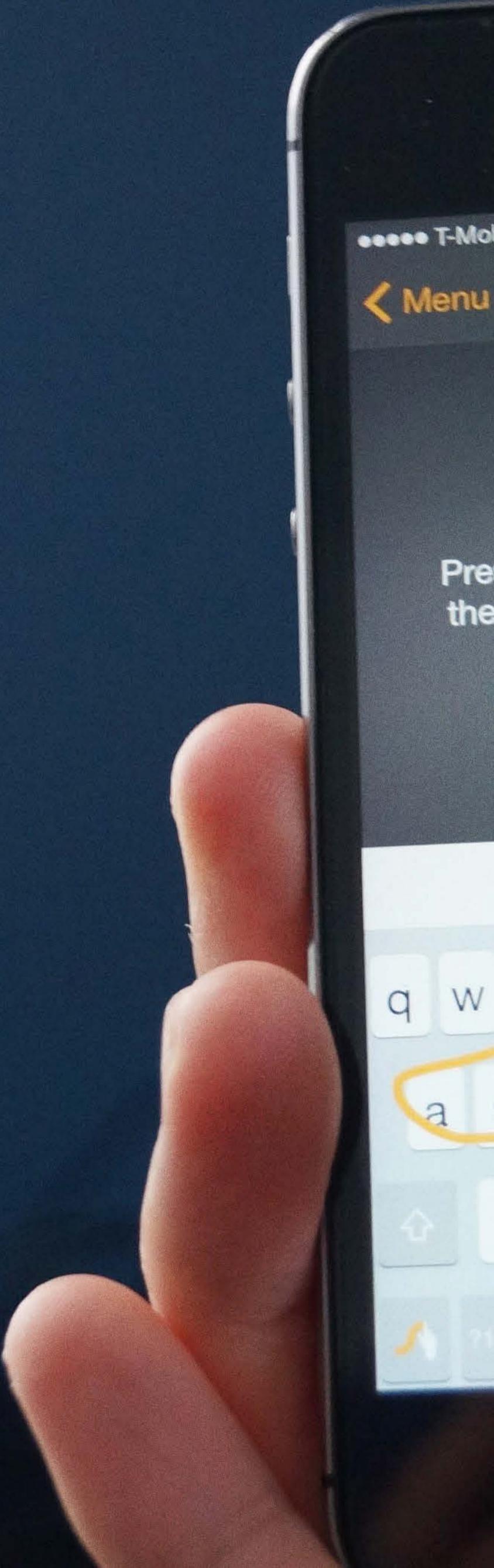
You’re also supposed to be able to enter entire words by swiping around the keyboard, but I wasn’t adroit enough to perfect the technique.

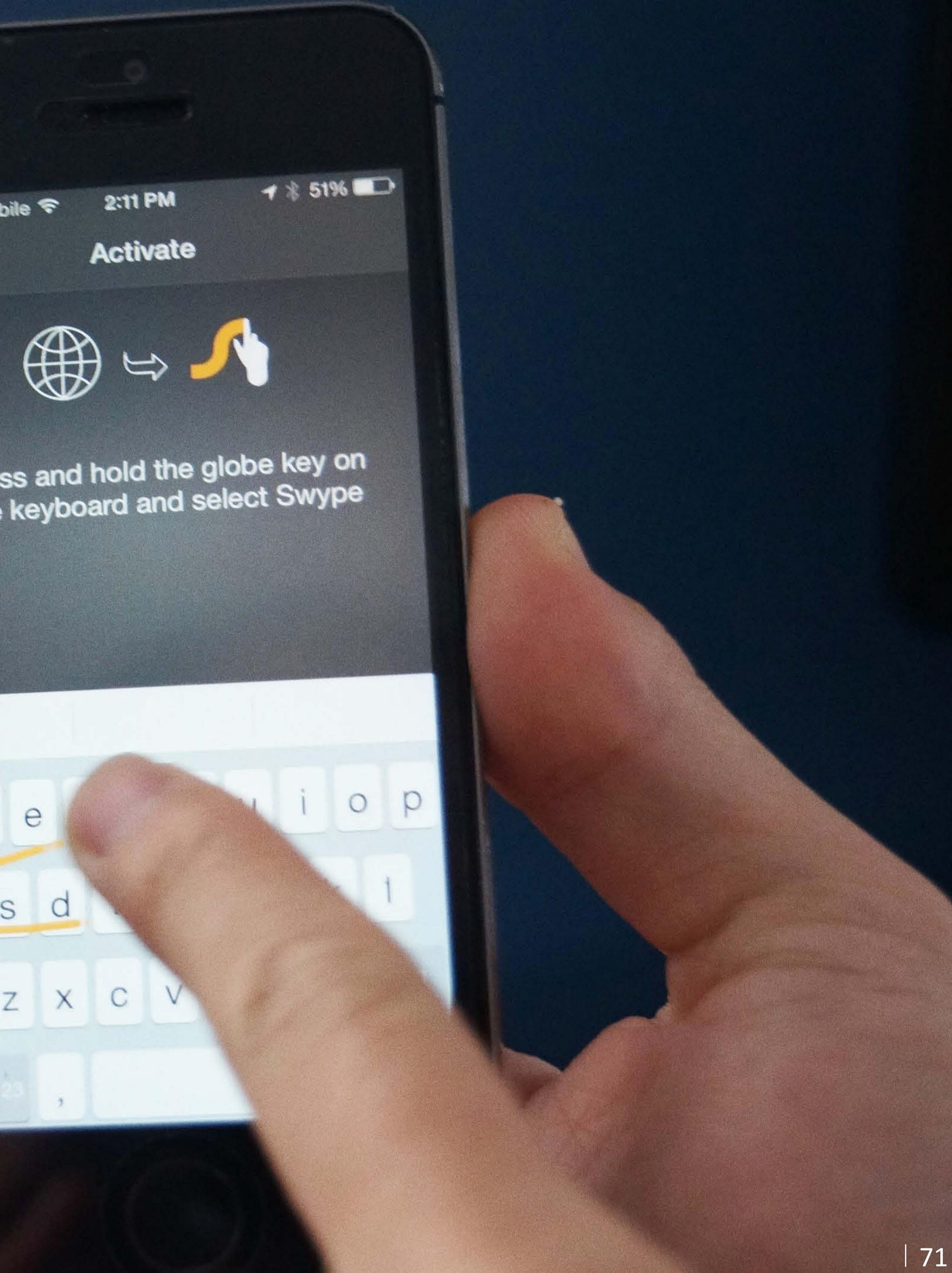
## MINUUM (\$1.99)

At first, what you’re typing looks like gibberish if you just look at the body of the text. But the keyboard grew on me once I realized I was supposed to focus on the ribbon above the keyboard, where six different word choices are constantly displayed. If you learn to focus on that ribbon, the word you want usually appears and can be inserted into the text with a quick tap.

Minuum’s name refers to its ability to be shrunk down to an ultra-small mode with a downward swipe. I had no use for this option on an iPhone, but it might be handy at times on the iPad’s larger screen.

Apple’s new keyboard is so much smarter than its predecessor that most longtime iPhone and iPad users probably will be quite happy just to use it. I recommend checking out SwiftKey or Swype if you are looking for an even more intelligent type.



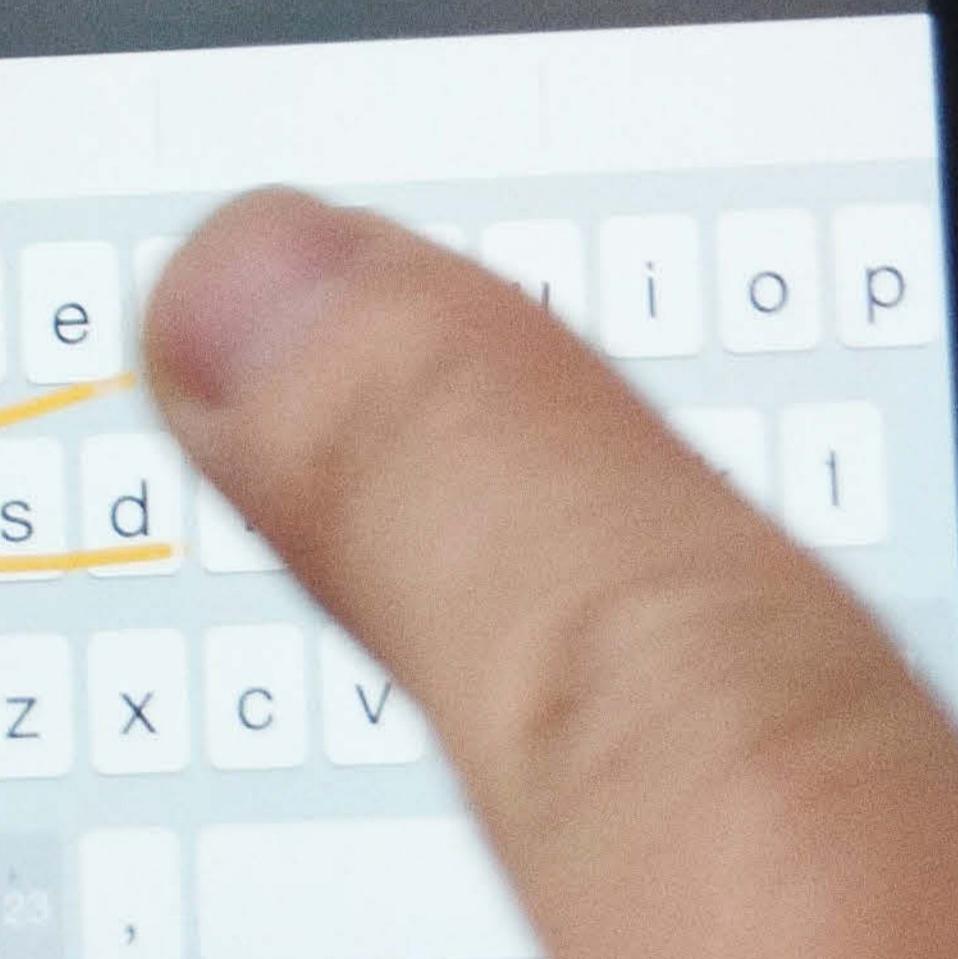


Mobile 2:11 PM 51%

Activate



Press and hold the globe key on  
the keyboard and select Swype



# GIFT GUIDE:

DRAGONS, ALIENS, HEROES FOR THE GAMER





Sony's PlayStation 4 video-game console has built an impressive lead over its competitors. That's good news for holiday shoppers because it has driven Microsoft and Nintendo to offer more budget-friendly holiday deals on their consoles.

Microsoft Corp.'s \$350 Xbox One packages have jettisoned the Kinect motion-sensing device, which some gamers didn't find appealing because it gave them more exercise than they would have liked. Instead, you get a copy of either "Assassin's Creed Unity" or "Sunset Overdrive." Meanwhile, Nintendo has a \$300 Wii U package with "Super Mario 3D World."

Sony Corp.'s console still costs \$400, but you can get "Grand Theft Auto V," updated with better graphics, free with one PS4 Black Friday bundle.

Of course, your gaming loved one probably already has the latest console. In that case, here are some new games to feed the machine. Be sure to find out which console your loved one owns, or there's bound to be disappointment.





# TITANFALL





## FOR ADULTS

- "Dragon Age: Inquisition" (Electronic Arts Inc., for the PS4, PS3, Xbox One, Xbox 360, PC, \$59.99): Anyone who's into "Game of Thrones" or "The Lord of the Rings" will adore this sword-and-sorcery epic from the role-playing masters at BioWare. It offers more than 100 hours of adventure as you build an army of humans, elves, dwarves and more to prevent demons from destroying a sprawling, gorgeous fantasy world.
- "Middle-earth: Shadow of Mordor" (Warner Bros., for the PS4, PS3, Xbox One, Xbox 360, PC, \$59.99): In this action-focused take on J.R.R. Tolkien's world, a sword-wielding ranger takes on a series of orc warlords, one by one. No two duels are the same, and victory requires a satisfying blend of strategy and reflexes.
- "Titanfall" (Electronic Arts, for the Xbox One, Xbox 360, PC, \$59.99) or "Destiny" (Activision, for the PS4, PS3, Xbox One, Xbox 360, \$59.99): Gamers who love to go online and shoot other gamers got two fresh arenas this year. "Titanfall" adds giant robots to the mayhem, while "Destiny" delivers a wider variety of intense cooperative battles.
- "Wolfenstein: The New Order" (Bethesda Softworks, for the PS4, PS3, Xbox One, Xbox 360, PC, \$59.99): Some trigger-happy gamers prefer a good story to the chaos of online play. For them, I recommend this chilling alternate history, in which a plucky resistance fighter tries to take down the Nazi regime that has overrun all of Europe.
- "Alien: Isolation" (Sega, for the PS4, PS3, Xbox One, Xbox 360, PC, \$59.95): The toothsome alien stalking this space station can't be killed, so anyone who goes in with guns blazing is likely to get eaten. It's almost as nerve-racking as the original "Alien" movie from 1979.





## FOR EVERYONE

- amiibo (Nintendo, Wii U, \$12.99): The “toys-to-life” category - figurines that interact with video games - has been the hottest thing in toy stores for the past few years. Nintendo Co. is finally joining the fray. Want to team up with Mario in “Super Smash Bros. for Wii U” (\$59.99)? Place his character on the Wii U’s GamePad, and you can teach him new fighting styles. The amiibo models include favorites such as Donkey Kong, Pikachu and Kirby. They are also compatible with “Mario Kart 8,” “Hyrule Warriors” and more games to come.

- “Disney Infinity 2.0: Marvel Super Heroes” (Disney, for the PS4, PS3, Xbox One, Xbox 360, Wii U, \$74.99): The Walt Disney Co., meanwhile, has expanded its line of playable figurines by calling on the Avengers to assemble. The starter kit includes Iron Man, Thor and Black Widow, all starring in a goofy, kid-friendly adventure in Marvel’s Manhattan. Additional heroes like Spider-Man and Groot cost \$15 apiece.

- “Skylanders Trap Team” (Activision, for the PS4, PS3, Xbox One, Xbox 360, Wii U, \$74.99): Activision started the whole toys-to-life trend with this blockbuster franchise, and this year’s model is as clever as ever. The new Trap Team Skylanders can capture villains in shells made of “traptanium” (known to the rest of us as plastic). Switching traps allows you to play as different bad guys. There are now hundreds of Skylander characters available, costing \$5 to \$16 apiece. Surely the collector in your family is missing a few.

- “Fantasia: Music Evolved” (Disney, for the Xbox One, Xbox 360, \$59.99): Players become conductors in Disney’s reimagining of the classic film, rearranging tunes from a playlist that goes from Mozart to Elton John to Nicki Minaj. Like most rhythm games, it’s good fun for family gatherings. (Be advised: It does require Kinect.)





- “Sid Meier’s Civilization: Beyond Earth” (2K Games, for the PC, \$49.99): The stargazer on your list will dig the latest “Civ” simulator, which adds all kinds of crazy technology, from nanorobotics to neural uploading, to the classic formula. Why settle for conquering Earth when there are whole new planets out there?

# TOP Free Apps

iOS



## #01 – Candy Crush Soda Saga

By King.com Limited

Category: Games

Requires iOS 5.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



## #02 – Facebook Messenger

By Facebook, Inc.

Category: Social Networking

Requires iOS 7.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5, iPhone 6, and iPhone 6 Plus.



## #03 – Instagram

By Instagram, Inc.

Category: Photo & Video

Requires iOS 6.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5, iPhone 6, and iPhone 6 Plus.



## #04 – YouTube

By Google, Inc.

Category: Photo & Video

Requires iOS 6.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



## #05 – iTunes U

By Apple

Category: Education

Requires iOS 7.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5, iPhone 6, and iPhone 6 Plus.



## #06 – New Words With Friends

By Zynga Inc.

Category: Games

Requires iOS 6.0 or later. Compatible with iPhone 4, iPhone 4S, iPhone 5, iPhone 5c, iPhone

5s, iPhone 6, iPhone 6 Plus, iPad, and iPod touch. This app is optimized for iPhone 5.



## #07 – Snapchat

By Snapchat, Inc.

Category: Photo & Video

Requires iOS 6.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



## #08 – Stick Hero

By Ketchapp

Category: Games

Requires iOS 4.3 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



## #09 – Pandora Radio

By Pandora Media, Inc.

Category: Music

Requires iOS 6.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



## #10 – Game of War - Fire Age

By Machine Zone, Inc.

Category: Games

Requires iOS 5.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.

# TOP Free Apps



## #01 – OS X Yosemite

By Apple  
Category: Utilities  
Compatibility: OS X 10.6.8 or later



## #02 – Getty Images Stream

By Getty Images Inc.  
Category: Photography  
Compatibility: OS X 10.10 or later, 64-bit processor



## #03 – Kindle

By AMZN Mobile LLC  
Category: Reference  
Compatibility: OS X 10.6 or later



## #04 – Memory Clean

By FIPLAB Ltd  
Category: Utilities  
Compatibility: OS X 10.7.4 or later, 64-bit processor



## #05 – Microsoft Remote Desktop

By Microsoft Corporation  
Category: Business  
Compatibility: OS X 10.7 or later, 64-bit processor



## #06 – Xcode

By Apple  
Category: Developer Tools  
Compatibility: OS X 10.8.4 or later



## #07 – Evernote

By Evernote  
Category: Productivity  
Compatibility: OS X 10.6.6 or later



## #08 – Extreme Landings

By RORTOS SRL  
Category: Games  
Compatibility: OS X 10.6.6 or later



## #09 – The Unarchiver

By Dag Agren  
Category: Utilities  
Compatibility: OS X 10.6.0 or later



## #10 – Microsoft OneNote

By Microsoft Corporation  
Category: Productivity  
Compatibility: OS X 10.9 or later

Mac OS X

# TOP Paid Apps

iOS



## #01 – Five Nights at Freddy's

By Scott Cawthon

Category: Games / Price: \$2.99

Requires iOS 5.1 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



## #02 – Minecraft – Pocket Edition

By Mojang

Category: Games / Price: \$6.99

Requires iOS 5.1.1 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



## #03 – Dirt Trackin'

By Tim Bennett

Category: Games / Price: \$2.99

Requires iOS 7.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



## #04 – Heads Up!

By Warner Bros.

Category: Games / Price: \$0.99

Requires iOS 6.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



## #05 – Swype

By Nuance Communications

Category: Utilities / Price: \$0.99

Requires iOS 8.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5, iPhone 6, and iPhone 6 Plus.



## #06 – Monument Valley

By ustwo™

Category: Games / Price: \$3.99

Requires iOS 6.0 or later. Compatible with iPhone 4, iPhone 4S, iPhone 5, iPhone 5c, iPhone 5s, iPhone 6, iPhone 6 Plus, iPad, and iPod touch. This app is optimized for iPhone 5.



## #07 – Afterlight

By Afterlight Collective, Inc

Category: Photo & Video / Price: \$0.99

Requires iOS 6.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



## #08 – Facetune

By Lightricks Ltd.

Category: Photo & Video / Price: \$3.99

Requires iOS 6.0 or later. Compatible with iPhone 4, iPhone 4S, iPhone 5, iPhone 5c, iPhone 5s, iPhone 6, iPhone 6 Plus, iPad, and iPod touch.

This app is optimized for iPhone 5, iPhone 6, and iPhone 6 Plus.



## #09 – Buddyman: Kick 2 (by Kick the Buddy)

By Crazylion Studios Limited

Category: Games / Price: \$0.99

Requires iOS 6.0 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.



## #10 – Geometry Dash

By RobTop Games AB

Category: Games / Price: \$1.99

Requires iOS 5.2 or later. Compatible with iPhone, iPad, and iPod touch.

This app is optimized for iPhone 5.

# TOP Paid Apps



## #01 – Disk Doctor

By FIPLAB Ltd

Category: Utilities / Price: \$2.99

Compatibility: OS X 10.7.3 or later, 64-bit processor



## #02 – GarageBand

By Apple

Category: Music / Price: \$4.99

Compatibility: OS X 10.9 or later



## #03 – OS X Server

By Apple

Category: Utilities / Price: \$19.99

Compatibility: OS X 10.9.5 or later



## #04 – 1Password

By AgileBits Inc.

Category: Productivity / Price: \$34.99

Compatibility: OS X 10.8.4 or later, 64-bit processor



## #05 – FaceTime

By Apple

Category: Social Networking / Price: \$0.99

Compatibility: OS X 10.6.6 or later



## #06 – BetterSnapTool

By Andreas Hegenberg

Category: Productivity / Price: \$1.99

Compatibility: OS X 10.6 or later, 64-bit processor



## #07 – Final Cut Pro

By Apple

Category: Video / Price: \$299.99

Compatibility: OS X 10.9.2 or later, 64-bit processor



## #08 – Current for Facebook

By AppDen LLC

Category: Social Networking / Price: \$1.99

Compatibility: OS X 10.8 or later, 64-bit processor



## #09 – Logic Pro X

By Apple

Category: Music / Price: \$199.99

Compatibility: OS X 10.8.4 or later, 64-bit processor



## #10 – Duplicate Detective

By FIPLAB Ltd

Category: Utilities / Price: \$1.99

Compatibility: OS X 10.7 or later, 64-bit processor

Mac OS X

# iTunes

## Review

LIVE FOR LOVE



*Trailer*

Movies  
& TV Shows

Rotten Tomatoes  
 36%



iTunes Preview



by R.J. Cutler  
Genre: Drama  
Released: 2014  
Price: \$14.99

★★★★★  
388 Ratings

# If I Stay

Mia Hall expected her hardest ever decision to be whether to head to Juilliard to chase her musical dreams, or instead be with Adam, her beloved. That changes drastically after what should have been a carefree family drive leaves her fighting for her life. One decision remains for her - one that will decide not just her future, but her ultimate fate.

## FIVE FACTS:

1. The film is based on the novel of the same name by Gayle Forman.
2. It stars Chloë Grace Moretz, Mireille Enos, Jamie Blackley, Joshua Leonard, Stacy Keach and Aisha Hinds.
3. The movie grossed \$78,274,843 worldwide.
4. Music was composed for the film by Heitor Pereira.
5. Previous contenders to play Mia **included Dakota Fanning and Emily Browning.**

See more in  
iTunes





*Interview with Chloë Grace Moretz  
and Jamie Blackley*

# 22 Jump Street

Overgrown adolescents everywhere will certainly identify with the two protagonists of this action comedy, Schmidt (Jonah Hill) and Jenko (Channing Tatum). They've twice made their way through high school, but big changes are now afoot for the pair when they go deep undercover at a local college. Subsequent events leave them questioning whether they can have a mature relationship.

## FIVE FACTS:

- 1.** The film was directed by Phil Lord and Christopher Miller.
- 2.** It is the sequel to 21 Jump Street, the 2012 film based on the television series of the same name.
- 3.** Principal photography and production **took place in New Orleans, Louisiana and San Juan, Puerto Rico.**
- 4.** The film **grossed \$330,737,774 worldwide.**
- 5.** A third film is already being developed, with Lord and Miller as producers.



iTunes Preview



by Phil Lord &  
Christopher Miller  
Genre: Action & Adventure  
Released: 2014  
Price: \$17.99

★★★★★  
576 Ratings

Rotten Tomatoes  
  
84%  
Fresh



Trailer



*Interview with Jonah Hill and Channing Tatum*





sun's  
out  
guns  
out

# iTunes

## Review



*Steal My Girl*



# Music



iTunes Preview



Genre: Pop  
Released: Nov 17, 2014  
16 Songs  
Price: \$14.99

★★★★★  
17345 Ratings

elvis

# FOUR (Deluxe Edition)

## One Direction

There have been few more exciting pop acts since the turn of the Millennium than One Direction, and on the evidence of this, their fourth studio album, they aren't going anywhere anytime soon. FOUR is undeniably personal fare from the English-Irish boy band, showing off singer-songwriter, R&B and piano-driven rock styles.

### FIVE FACTS:

1. One Direction first came to prominence on the British televised singing competition The X-Factor in 2010.
2. They subsequently scored hit singles including "What Makes You Beautiful", "Live While We're Young" and "Story Of My Life".
3. The band **was proclaimed as Billboard's Top New Artist of 2012**.
4. 2013's Midnight Memories album **made One Direction the first group in the history of the US Billboard 200** to have their first three albums debut at number one.
5. FOUR's lead single, "Steal My Girl", **reached number 13 on the US Billboard Hot 100**.

See more in  
iTunes

# ONE DIRECTION



*Interview with One Direction*



fection

*elvis*

# No Fixed Address

## Nickelback

Canadian rockers Nickelback mark the sixth anniversary of their sixth studio album, Dark Horse, with the release of No Fixed Address. It is also the band's first release on Republic Records, after its exit last year from long-time record label, Roadrunner Records. The album was preceded by the lead single "Edge Of A Revolution", which topped the US Billboard Mainstream Rock Songs chart.

### FIVE FACTS:

- 1. The album title, No Fixed Address, is inspired by the fact that the album was recorded in many different places, rather than one single spot.**
- 2. The band was formed in 1995 in Hanna, Alberta.**
- 3. It was initially a cover band called the Village Idiots.**
- 4. Lead singer Chad Kroeger has said that some of the new album's tracks mark a significant departure from the band's typical musical style.**
- 5. "What Are You Waiting For?" was released as the second single, reaching number 11 on the US Billboard Hot Rock Songs chart.**



[iTunes Preview](#)



Genre: Rock

Released: Nov 17, 2014

11 Songs

Price: \$11.99



621 Ratings





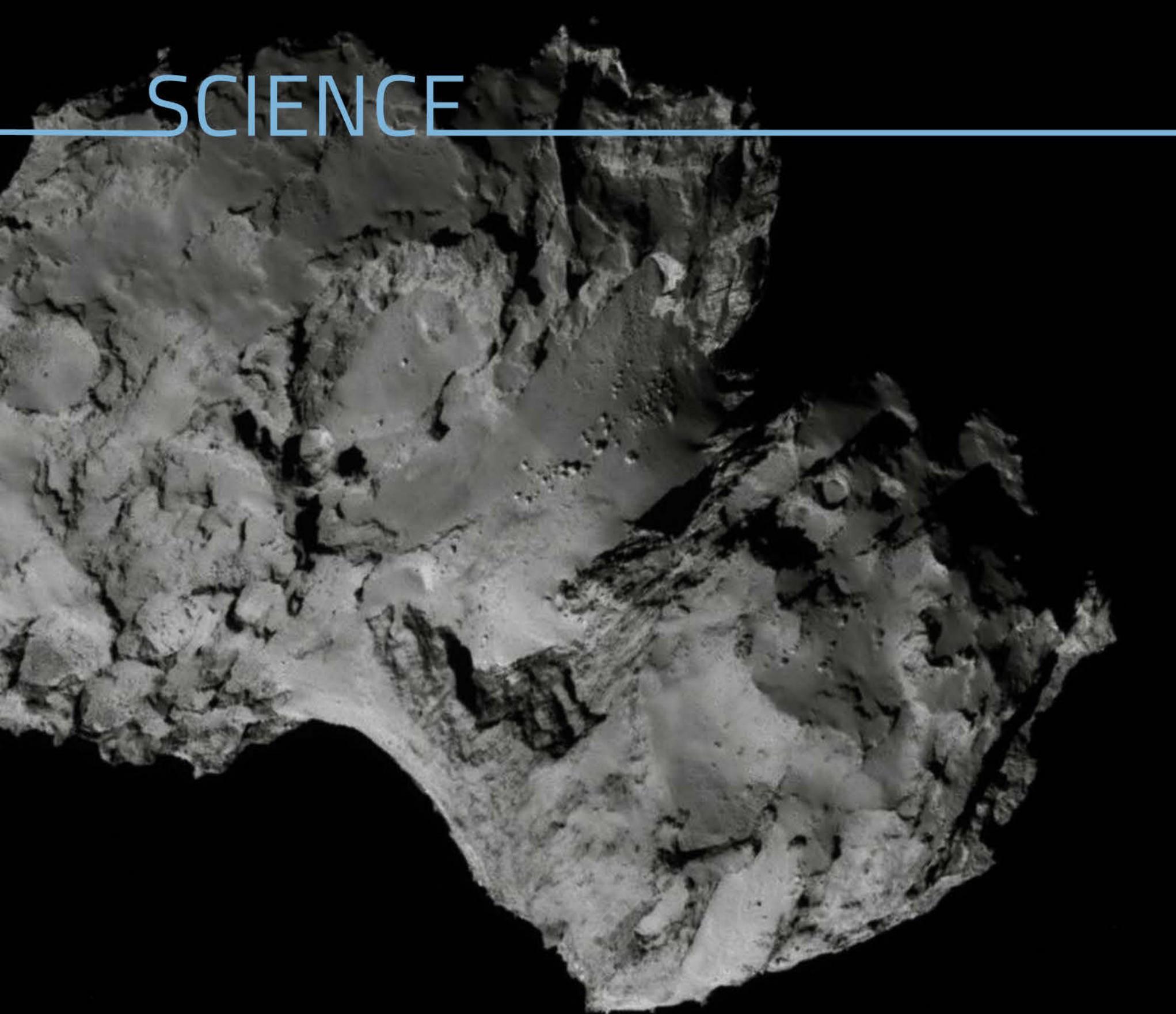
*Edge Of A Revolution*



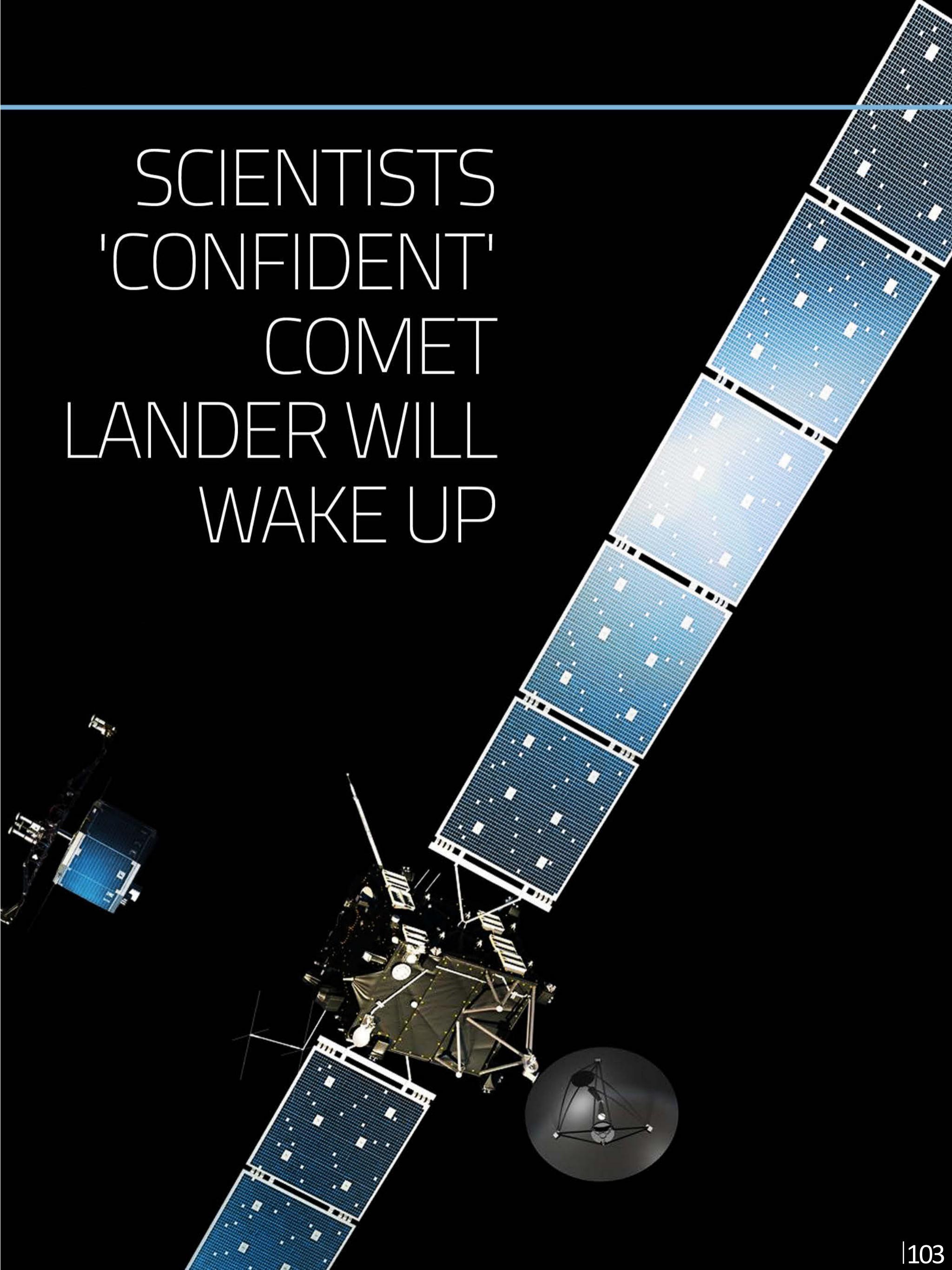


*What Are You Waiting For? (Lyric Video)*

SCIENCE



# SCIENTISTS 'CONFIDENT' COMET LANDER WILL WAKE UP



A burst of sunshine in the spring could be just the wakeup call for Europe's comet lander.

Scientists raised hopes Monday that as the Philae lander nears the sun its solar panel-powered battery will recharge, and the first spacecraft to touch down on a comet will send a second round of scientific data back to Earth.

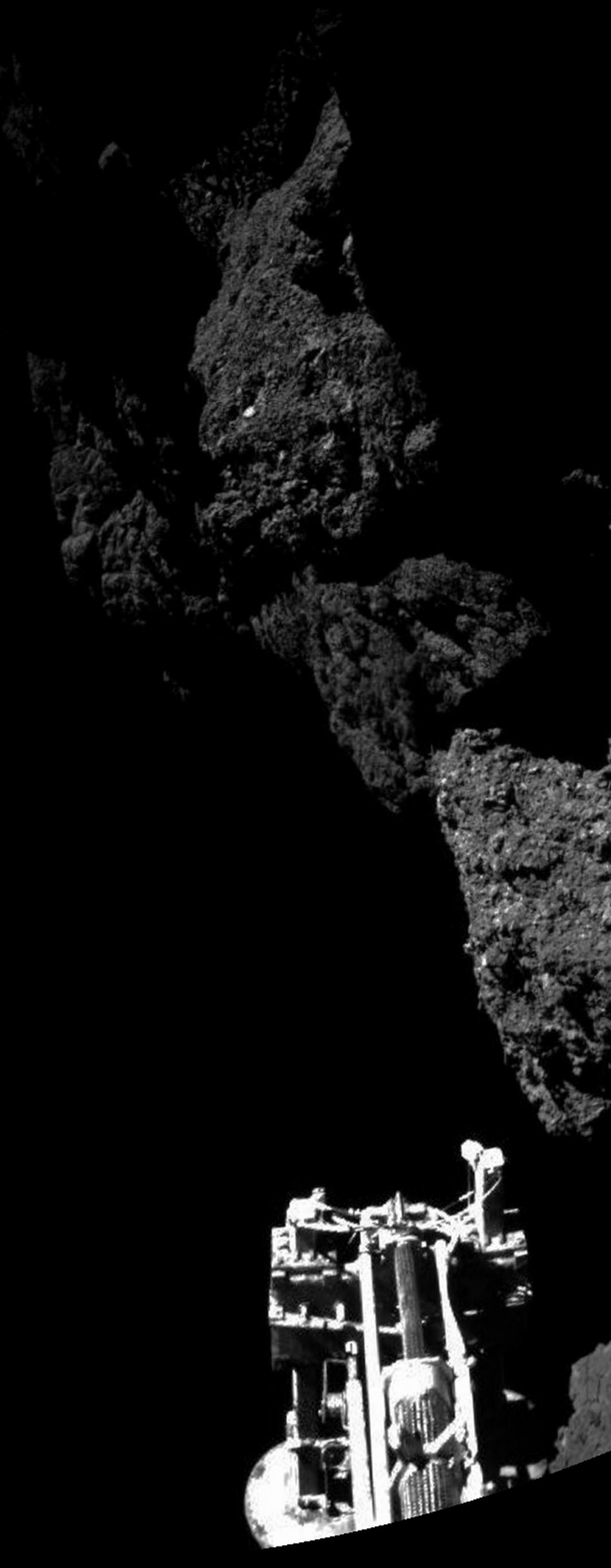
Since landing with a bounce on the comet Wednesday, Philae has already sent back reams of data that scientists are eagerly examining. But there were fears its mission would be cut short because it came to rest in the shadow of a cliff. Its signal went silent Saturday after its primary battery ran out.

Shortly before that happened, the European Space Agency decided to attempt to tilt the lander's biggest solar panel toward the sun - a last-ditch maneuver that scientists believe may have paid off.

"We are very confident at some stage it will wake up again and we can achieve contact," Stephan Ulamec, the lander manager, told The Associated Press.

That should happen next spring, when Philae and the comet it's riding on - called 67P/Churyumov-Gerasimenko - get closer to the sun, warming up a secondary battery on board and bringing it out of its unplanned hibernation. A few days of sunshine on the solar panels should be enough to charge the battery sufficiently to resume collecting scientific data, Ulamec said.

Philae's position in the shadows may even prove to be a blessing in disguise. Shielded from the sun's rays, the lander could survive for longer







as the comet approaches perihelion - its closest point to the sun - in August.

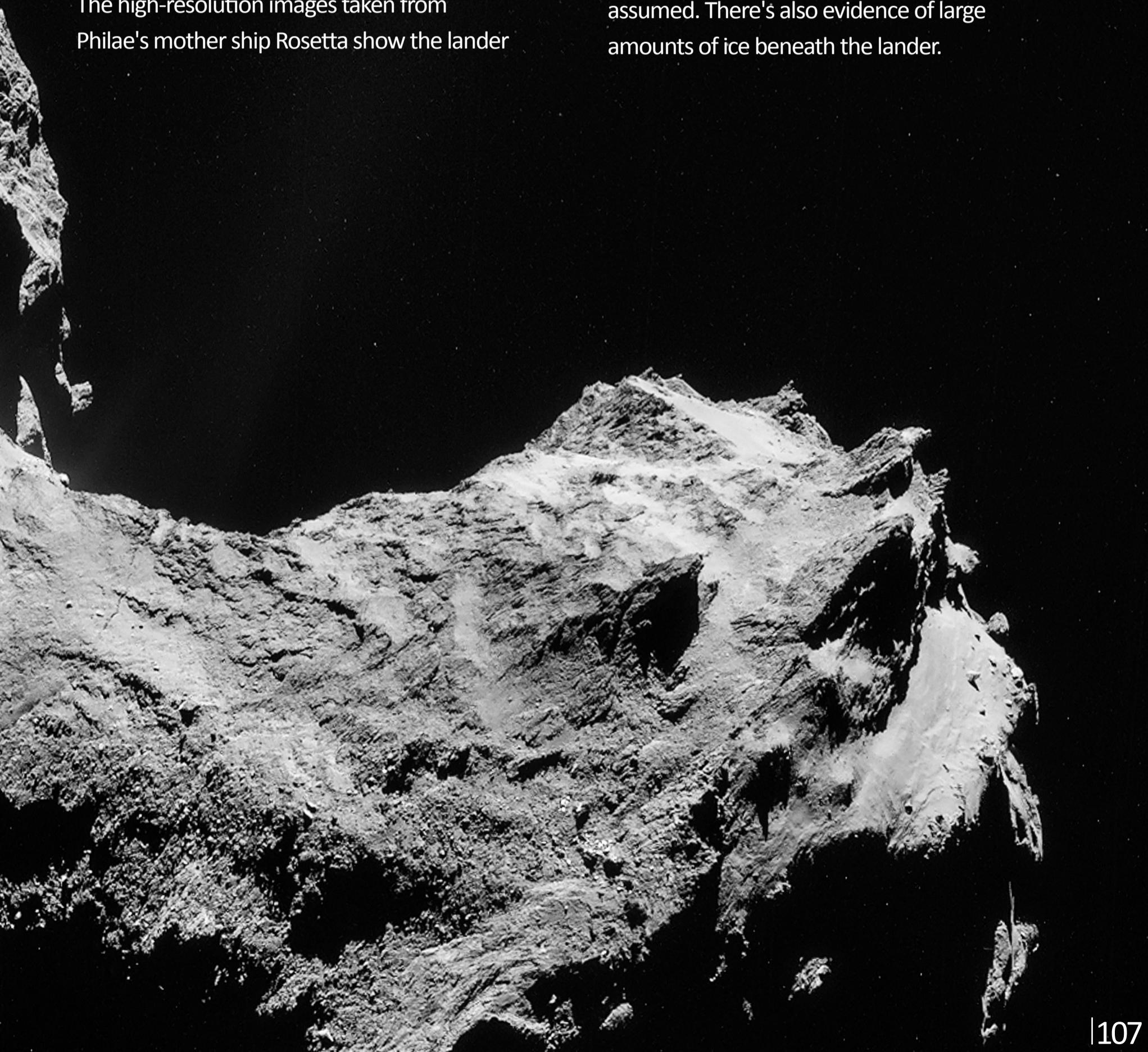
Before they can say for certain if they'll be able to restore contact with Philae, scientists first need to find out where on the 2.5-mile (4-kilometer)-wide comet the washing machine-sized lander is, he added.

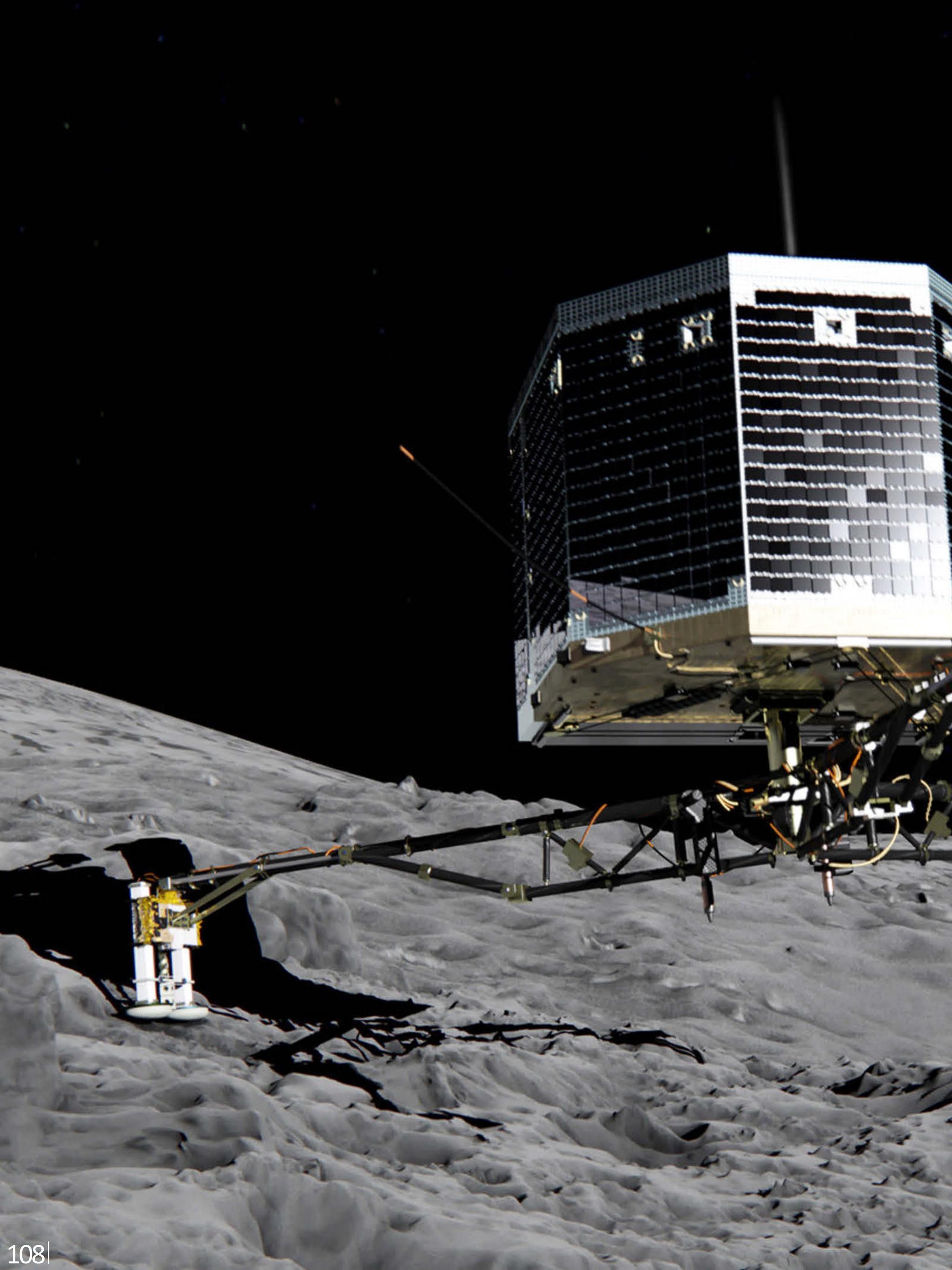
New pictures released Monday offered very good clues.

The high-resolution images taken from Philae's mother ship Rosetta show the lander

descending toward the comet, then bouncing off when the thrusters and harpoons meant to anchor it to the surface failed. It drifted through the void for two hours before touching down again - after a second, smaller bounce - then coming to rest in a shallow crater.

Scientists at the German Aerospace Center said Monday that an initial review of data the lander sent back 311 million miles to Earth showed the comet's surface is much tougher than previously assumed. There's also evidence of large amounts of ice beneath the lander.







Scientists had speculated the comet's surface could be quite soft, but that has turned out not to be the case. "The strength of the ice found under a layer of dust on the first landing site is surprisingly high," said Klaus Seidensticker of the German Aerospace Center.

Scientists are still waiting to find out whether Philae managed to drill into the comet and extract a sample for analysis.

Material beneath the surface of the comet has remained almost unchanged for 4.5 billion years, so the samples would be a cosmic time capsule that scientists are eager to study.

One of the things they are most excited about is the possibility that the mission might help confirm that comets brought the building blocks of life - including water - to Earth.

Tantalizingly, one of Philae's instruments was able to "sniff" the presence of organic molecules on the comet, the space center said. A full analysis of the molecules is still underway.

The European Space Agency has stressed that even if the lander fails to awaken again, Rosetta will be able to collect about 80 percent of the data scientists are hoping to glean from the \$1.6 billion mission.

# AT&T STOPS ADDING WEB TRACKING CODES ON CELLPHONES





AT&T Mobility, the nation's second-largest cellular provider, said Friday it's no longer attaching hidden Internet tracking codes to data transmitted from its users' smartphones. The practice made it nearly impossible to shield its subscribers' identities online.

The change by AT&T essentially removes a hidden string of letters and numbers that are passed along to websites that a consumer visits. It can be used to track subscribers across the Internet, a lucrative data-mining opportunity for advertisers that could still reveal users' identities based on their browsing habits.

Verizon Wireless, the country's largest mobile firm, said Friday it still uses this type of tracking,

known as "super cookies." Verizon spokeswoman Debra Lewis said business and government customers don't have the code inserted. There has been no evidence that Sprint and T-Mobile have used such codes.

"As with any program, we're constantly evaluating, and this is no different," Lewis said, adding that consumers can ask that their codes not be used for advertising tracking. But that still passes along the codes to websites, even if subscribers say they don't want their data being used for marketing purposes.

The tracking codes are part of the latest plan by the cellular industry to keep tabs on users and their devices. While the codes don't explicitly



contain personal information, they're unique and nonetheless sent to websites alongside personal details that a user may submit voluntarily - like a name or a phone number.

That means enough data can transform a large chunk of random digits into a digital fingerprint that's as identifying as a Social Security number. AT&T said Friday its tracker was part of a testing project that's been phased off of its network.

"This is more like a license plate for your brain," said Jacob Hoffman-Andrews, a senior staff technologist with the Electronic Frontier Foundation, a civil liberties organization that opposed the practice. "Everything you wonder about, and read, and ask the Internet about gets this header attached to it. And there are ad agencies out there that try to associate that browsing history with anything that identifies you."



For mobile users, the quest for online privacy isn't easy. Even if subscribers wanted to switch service providers to what they think is a more privacy-friendly carrier, they would likely be slapped with hundreds of dollars in early termination fees before leaving.

The magazines Wired and Forbes first reported last month that Verizon and AT&T were inserting the tracking numbers, even if their subscribers wanted to opt out.

The investigative website ProPublica also discovered that Twitter's advertising arm was using Verizon's tracking codes, which could be used to build a dossier about a person's behavior on mobile devices.

Some cell providers already collect and store the approximate location of their subscribers' phones, according to government documents from 2010. That has raised alarm among privacy advocates, who fear government investigators

can obtain such personal data and even track Americans' movements without their knowledge or consent.

Consumers' interest in privacy and their digital anonymity has intensified in recent years, following revelations by former National Security Agency analyst Edward Snowden. Top secret NSA documents he leaked to journalists revealed the NSA was collecting the phone records and digital communications of millions of citizens not suspected of a crime, prompting congressional reform.

On Thursday, The Wall Street Journal reported that the U.S. Marshals Service was flying airplanes above American cities to secretly collect certain cellphone information from criminals while incidentally gathering data from innocent Americans. The Justice Department would not confirm the practice, but said in a statement Friday the Marshals Service "does not maintain any databases for the purposes of retaining cellphone information of the general public."



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# TOP 10 SONGS

**BLANK SPACE**

TAYLOR SWIFT

**DO THEY KNOW IT'S CHRISTMAS? (2014)**

BAND AID 30

**TAKE ME TO CHURCH**

HOZIER

**SHAKE IT OFF**

TAYLOR SWIFT

**ALL ABOUT THAT BASS**

MEGHAN TRAINOR

**ANIMALS**

MAROON 5

**NIGHT CHANGES**

ONE DIRECTION

**JEALOUS**

NICK JONAS

**I'M NOT THE ONLY ONE**

SAM SMITH

**TAKE ME TO CHURCH**

**(THE VOICE PERFORMANCE)**

MATT McANDREW





# TOP 10 ALBUMS

**FOUR (DELUXE VERSION)**

ONE DIRECTION

**1989**

TAYLOR SWIFT

**GOOD GIRLS (EP)**

5 SECONDS OF SUMMER

**SONGS OF INNOCENCE +**

U2

**THAT'S CHRISTMAS TO ME**

PENTATONIX

**INTERSTELLAR (ORIGINAL MOTION PICTURE SOUNDTRACK) [DELUXE VERSION]**

HANS ZIMMER

**PUNK GOES POP, VOL. 6**

VARIOUS ARTISTS

**FOUR**

ONE DIRECTION

**BLACK WIDOW**

IN THIS MOMENT

**SONIC HIGHWAYS**

FOO FIGHTERS

T.S.



won

Blank Space

# TOP 10

## MUSICVIDEOS

### **BLANK SPACE**

TAYLOR SWIFT

### **SHAKE IT OFF**

TAYLOR SWIFT

### **ALL ABOUT THAT BASS**

MEGHAN TRAINOR

### **MARY, DID YOU KNOW?**

PENTATONIX

### **THE HEART WANTS WHAT IT WANTS (OFFICIAL VIDEO)**

SELENA GOMEZ

### **BANG BANG**

**(FEAT. ARIANA GRANDE & NICKI MINAJ)**

JESSIE J

### **SOMETHING IN THE WATER**

CARRIE UNDERWOOD

### **BOOTY (FEAT. Iggy Azalea)**

JENNIFER LOPEZ

### **FIREBALL (FEAT. JOHN RYAN)**

PITBULL

### **GOOD GIRLS**

5 SECONDS OF SUMMER





# TOP 10 TV SHOWS

**CONSUMED**

*THE WALKING DEAD, SEASON 5*

**STICKY CONTENT**

*THE GOOD WIFE, SEASON 6*

**CONTACT**

*REVENGE, SEASON 4*

**PARTY CRASHING**

*KOURTNEY & KHLOE TAKE THE HAMPTONS, SEASON 1*

**SO IT GOES**

*MADAM SECRETARY, SEASON 1*

**SMASH THE MIRROR PART 1**

*ONCE UPON A TIME, SEASON 4*

**SELF HELP**

*THE WALKING DEAD, SEASON 5*

**THE LAST SUPPER**

*SCANDAL, SEASON 4*

**NO MOORE APOLOGIES**

*THE REAL HOUSEWIVES OF ATLANTA, SEASON 7*

**BULLSEYE**

*AMERICAN HORROR STORY: FREAKSHOW, SEASON 4*

# THE WINDY CITY OPEN S



# TOP 10 BOOKS

**CAPTIVATED BY YOU**  
*Sylvia Day*

**THE ESCAPE**  
*David Baldacci*

**THE JOB**  
*Janet Evanovich & Lee Goldberg*

**MONEY MASTER THE GAME**  
*Tony Robbins*

**THE CINDERELLA MURDER**  
*Mary Higgins Clark & Alafair Burke*

**FIFTY SHADES OF GREY**  
*E L James*

**GRAY MOUNTAIN**  
*John Grisham*

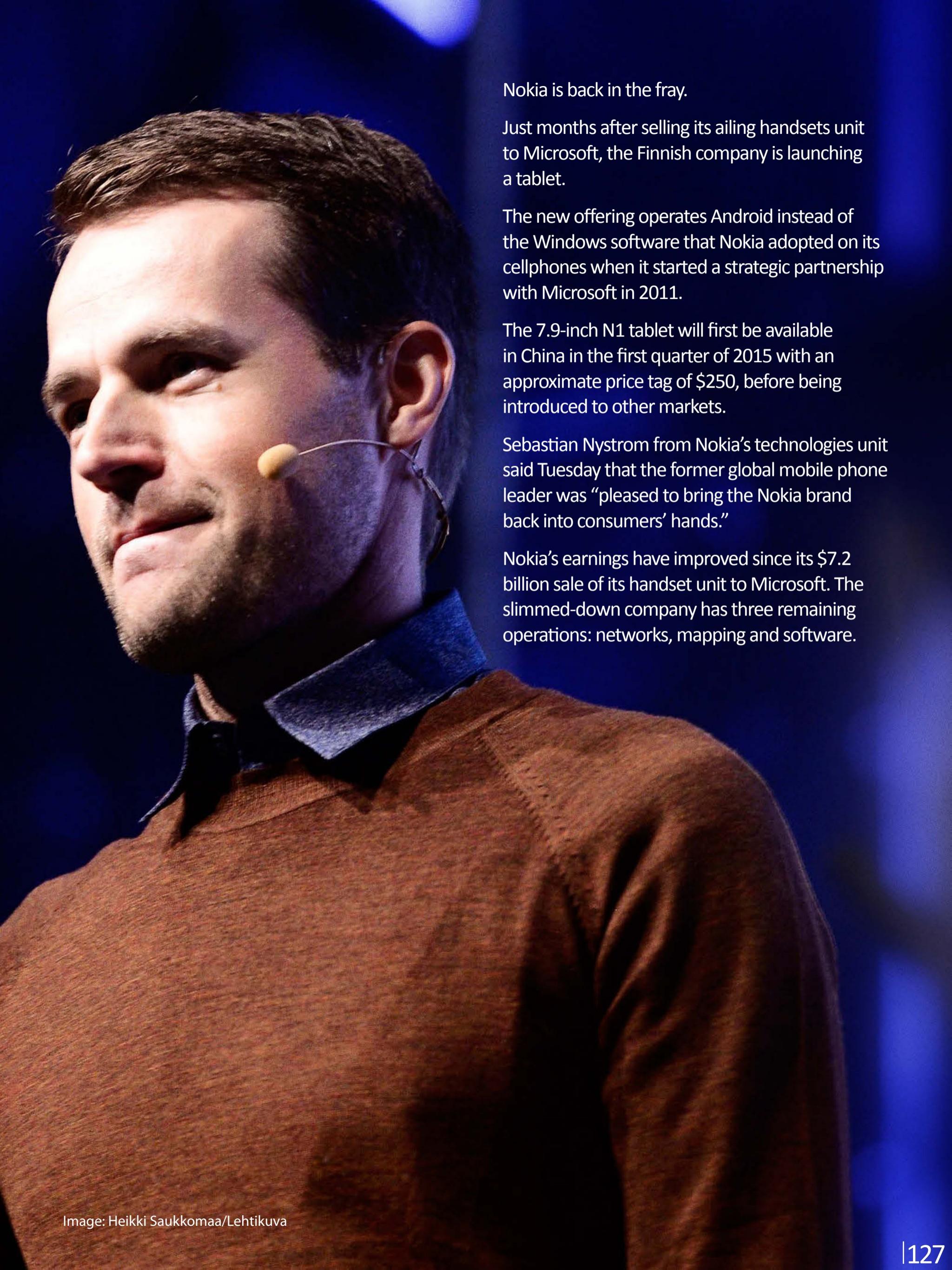
**GONE GIRL**  
*Gillian Flynn*

**THE BURNING ROOM**  
*Michael Connelly*

**THE ANDY COHEN DIARIES**  
*Andy Cohen*

# NOKIA BOUNCES BACK WITH LAUNCH OF ANDROID TABLET





Nokia is back in the fray.

Just months after selling its ailing handsets unit to Microsoft, the Finnish company is launching a tablet.

The new offering operates Android instead of the Windows software that Nokia adopted on its cellphones when it started a strategic partnership with Microsoft in 2011.

The 7.9-inch N1 tablet will first be available in China in the first quarter of 2015 with an approximate price tag of \$250, before being introduced to other markets.

Sebastian Nystrom from Nokia's technologies unit said Tuesday that the former global mobile phone leader was "pleased to bring the Nokia brand back into consumers' hands."

Nokia's earnings have improved since its \$7.2 billion sale of its handset unit to Microsoft. The slimmed-down company has three remaining operations: networks, mapping and software.



Whatsu

A large, stylized WhatsApp logo is positioned on the left side of the page. It features a green circle containing a white phone receiver icon. To the right of the circle, the word "WhatsApp" is written in its signature white, rounded font.

# WHATSAPP ENCRYPTS MESSAGES FROM BEGINNING TO END

WhatsApp, the globally popular instant messaging system owned by Facebook, has begun using a powerful new encryption program aimed at protecting users' conversations from unwanted surveillance and snooping.

The messaging service, which has 600 million users and is especially popular in Europe and Asia, added the new encryption to its last update for Android smartphones, according to Open Whisper Systems, the San Francisco-based software group that developed the "TextSecure" program with help from U.S. government grants and private funding.

Privacy advocates say WhatsApp's decision to incorporate so-called "end-to-end" encryption will help users communicate without the fear of someone reading their messages. WhatsApp cofounder Jan Koum has said he's deeply committed to user privacy because he grew up in the Soviet Union during the 1980s, when his mother and other adults routinely assumed that authorities eavesdropped on their phone calls. The move comes as other leading tech companies also are boosting data encryption, despite criticism from some in law enforcement who say that can make it more difficult for authorities to catch terrorists or other criminals.

Google Inc. and Facebook Inc. encrypt users' email and messages while they move within each



10:43

orange

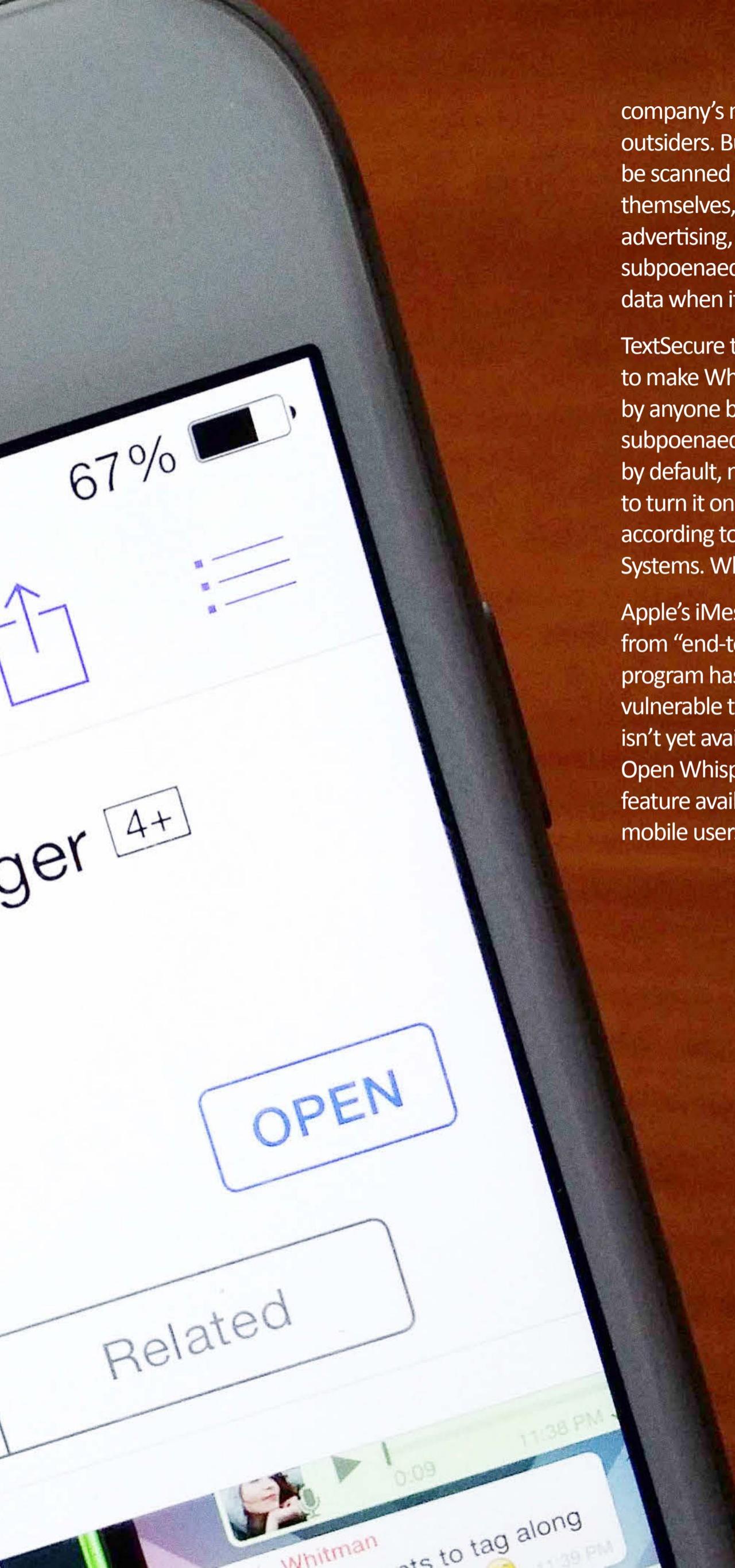
Back

WhatsApp Messenger  
WhatsApp Inc. >

Essentials

★★★★★ (76)

Reviews



company's network, so they can't be read by outsiders. But experts say those messages can still be scanned at certain points by the companies themselves, for commercial purposes such as advertising, and can be read by authorities if subpoenaed. Apple and Google also encrypt user data when it's stored on their mobile devices.

TextSecure takes that a step further; it's designed to make WhatsApp messages unable to be read by anyone but the sender and recipient, even if subpoenaed. The encryption feature is offered by default, meaning WhatsApp users don't have to turn it on and shouldn't notice its presence, according to a statement from Open Whisper Systems. WhatsApp declined comment Tuesday.

Apple's iMessage service also encrypts data from "end-to-end" but some experts say Apple's program has technical features that may leave it vulnerable to determined snooping. TextSecure isn't yet available for WhatsApp on iPhones, but Open Whisper said it is working to make the feature available to iOS and other non-Android mobile users.

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